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FROM

THE COMMISSIONER OF AGRICULTURE,

TRANSMITTING

Report for 1887 of the Bureau of Animal Industry.

FEBRUARY 6, 1888.—Ordered to be printed and referred to the Committee on Agriculture and Forestry.

U. S. DEPARTMENT OF AGRICULTURE,
Washington, D. C., February 2, 1888.

SIR: I have the honor to transmit herewith a report of the operations of the Bureau of Animal Industry for the year 1887, in compliance with the requirements of section 11 of the act approved May 29, 1884, for the establishment of this Bureau.

Very respectfully,

NORMAN J. COLMAN,
Commissioner of Agriculture.

The PRESIDENT PRO TEMPORE OF THE SENATE.

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REPORT OF THE OPERATIONS OF THE BUREAU OF ANIMAL INDUSTRY FOR 1887.

The work for extirpating contagious pleuro-pneumonia and for preventing its spread into uninfected States and Territories has recently been the most important business of the Bureau of Animal Industry, and because of its urgent nature and the evident intention of the law has received more attention than any of the other duties which have come before it. The other lines of work mentioned in the act establishing the Bureau have, however, been kept in hand and very much valuable work has been done. There has been continual co-operation with the authorities of the Western States and Territories to prevent as far as possible the losses produced by the disease generally known as Texas fever. There has been constant investigation of reported outbreaks of cattle disease in various States, to determine the nature of maladies supposed to be dangerous, and the proper methods to be employed in their prevention and treatment. There has been a scientific investigation carried on regarding the cause and the means of preventing our worst contagious diseases, and there has been an investigation made into the condition of different branches of the animal industry in the various States. In addition to the work just mentioned, there has been the clerical work of the Bureau—the correspondence, the record of the work, the supervision of accounts, the preparation of reports, etc., which during the past year has required a great amount of labor.

In attempting to present this work with considerable detail, I will first refer to the measures adopted for the suppression of pleuro-pneumonia, and then more briefly recount the most important part of what has been done in the other directions.

PLEURO PNEUMONIA.

At the time my last report was submitted the contagious pleuro-pneumonia, or European lung plague of cattle, existed not only in the plague spots of the Eastern States, where its presence has been recognized for years, but to an alarming extent in Chicago, one of the greatest live-stock centers of the country. The knowledge that this deadly contagion had fixed itself so far in the interior, and where there was so much danger of its being scattered in many directions by the movement of cattle, caused apprehension and alarm among the cattle owners and business men of all the Western States and Territories. The introduction of cattle, not only from Cook County but from the whole State of Illinois, was prohibited by State authorities in many instances. Thus there was at once a most serious and widespread interruption of traffic and disturbance of values, in addition to the losses from the disease.

When the outbreak at Chicago was discovered, and for some months afterwards, both National and State laws applicable to its eradication were imperfect. The appropriation for the Bureau of Animal Industry for the year ending June 30, 1887, authorized the purchase of diseased animals whenever it was necessary to prevent the spread of pleuro-pneumonia from one State into another; but as the statute then in force in Illinois required the slaughter of animals affected with this disease without compensation, it did not appear necessary that they should be purchased by the General Government. The work of the Department was therefore confined to an investigation of the extent of the disease and the maintenance of a guard over the infected distillery stables and over one infected farm upon which were found exposed about 250 head of cattle.

The inspection made by the Department veterinarians soon showed that the contagion had been disseminated quite extensively by diseased cattle which had pastured upon the vacant lots and commons about the city, and there mingled with many milch cows which had been allowed to run at large.

It was at this time that the first signs of disagreement began to show themselves between the State Live Stock Commission and the inspectors of the Department. The discovery that such a dreaded contagion had been scattered so freely about Chicago had a serious effect upon the cattle traffic at that point and arrayed those interested in this traffic against the work of investigation.

Some of the newspapers were exceedingly bitter in their remarks, and day after day asserted in the most positive manner that pleuro-pneumonia had never existed there. This local feeling appeared to extend to and affect to a certain extent the State authorities. Newspaper interviews with them appeared in which the inspectors were contemptuously referred to as Government cow doctors, their methods of work were criticised, and their discoveries were questioned. The inspectors complained that the State commissioners were inclined to discredit their reports of affected animals; that prompt action was not taken to confirm their diagnosis, and that in the meantime the owner would in some way dispose of the diseased animals, and the consequence was that when a further investigation was made no disease was found, and the inspector was accused of reporting pleuro-pneumonia where it did not exist.

It should be explained in this connection that in order to accomplish as much as possible with the imperfect authority then possessed, the Department inspectors were ordered to report daily the result of their investigations to the State commissioners in order that they might take immediate action when this was necessary. The deputy sheriffs employed to guard the infected herds were placed under the control of the State commissioners, and all arrangements were made with the view that the work might be kept in hand and intelligently directed by them.

After the Department assumed the expense of guarding the distillery stables, preparations for the slaughter of the animals contained therein did not progress as rapidly as had been anticipated, and it was not until November 23, or two months after the plan of co-operation was agreed upon, that the animals were taken out and slaughtered. The expense of maintaining the guard day and night for this time was very heavy, as it required the services of thirty-two deputy sheriffs; and during this time nothing was done to eradicate the disease from the smaller herds about the city, where there was even more danger of spreading the contagion than from the distilleries. The inspectors were employed

making inspections and serving quarantine notices by direction of the State live-stock commission, and these notices were for the most part disregarded by the owners of the cattle.

It was felt that when the distillery stables were at last emptied the time had come for careful, thorough, and radical measures for the extirpation of the plague. I was greatly surprised, therefore, to learn that when the cattle from these stables were all slaughtered the State commission, instead of having the premises thoroughly disinfected under competent supervision, or of allowing this Department to disinfect them, as contemplated by the rules and regulations, intended allowing these stables to be refilled at once after such disinfection as might be practiced by the owners without professional supervision. This proposition was coupled with the statement that the commission intended to try an experiment upon a grand scale to determine whether or not pleuropneumonia could be contracted from infected buildings and to determine for their guidance in the future whether disinfection was necessary.

There are so many cases on record where this plague has been contracted from infected premises that it seemed to me there would be serious danger of its re-appearance if cattle were placed so soon in these intensely infected buildings without a most careful disinfection. As three or four months would elapse before the result of this experiment could be known, and as during this time there would be doubts as to whether the cattle were infected, there would remain a necessity, or at least a desirability, of having the guard maintained for this long period. It appeared to me that the Government should not be put to this additional expense without my consent, particularly as experience at other places had shown that the propagation of this plague by mediate contagion depends upon conditions of temperature, weather, season, and climate, and its failure to re-appear in one stable at a certain time was no guaranty that it would not re-appear in another stable at a different time. The object of the Department was to secure the complete extirpation of the disease in as short a time as possible, and to do this with all the safeguards that could be thrown around the work, so that the country would have confidence in the result and the cattle trade be resumed without hesitation. I could not therefore accept the results of a single trial of this nature, nor could I consent to have the measures for the suppression of the plague modified to accord with the result of such a test.

Representations to this effect were made to the Commissioners by the chief inspector of the Department in Illinois. The Chief of the Bureau of Animal Industry wrote requesting that action looking to the refilling of the stables be deferred until a consultation could be held. Later I addressed the Commissioners a letter claiming the right under our agreement for co-operation to have a thorough disinfection carried out while the premises were unoccupied. The reply received from the Commissioners stated that an order had been made allowing the owners to refill the stables as soon as the sick animals had been removed; that they were desirous of testing the possibility of infection by mediate contagion; and that the owners had thoroughly disinfected the occupied part of their stables and agreed to make certain alterations which would separate this part from that which was unoccupied and had not been disinfected.

These statements appeared on their face to be more or less contradictory; for if the stable had been thoroughly disinfected there could be no experiment to test infection by mediate contagion, because the contagion would have been destroyed by the disinfection. And on the other hand, if the test was being made in such a way as to decide the

mediate contagion theory, then it was evident the disinfection had not been thoroughly done. A further inquiry developed the fact that the owners had not made the changes in the stable which they had agreed with the State commissioners to make before the cattle were put in.

This test, by which the Illinois commissioners expected to decide as to the necessity of disinfection in other parts of the city, was therefore complicated to such an extent that if the disease failed to re-appear in these stables it was impossible to decide whether the virus had been destroyed by the cold weather then prevailing or by the partial disinfection practiced, or whether the result was really due to the fact that mediate contagion is impossible. Under these circumstances I felt it my duty to write to Governor Oglesby, with whom the agreement for co-operation had been made, and request him to interfere and cause the cattle recently put upon these premises to be sent to the slaughter-house in order that the place might be thoroughly disinfected by the Department and all apprehensions of danger removed.

The governor made no reply to this communication. The commissioners assumed a hostile attitude, made serious charges against the inspectors of the Department, and gave orders that they should no longer be admitted to the quarantined stables. Under these circumstances it seemed impossible for the work to go on successfully; but owing to the great danger of infected cattle being taken to other States I was reluctant to withdraw the force of the Department as long as anything could be done. The deputy sheriffs were accordingly kept at work serving quarantine notices, and the veterinarians were busy investigating the extent of the contagion and inquiring into the nature of reported outbreaks of disease in the vicinity of Chicago in which the symptoms resembled those of pleuro-pneumonia.

My apprehensions that diseased cattle would be taken out of the State were well founded, as an outbreak occurred at Buffalo, N. Y., about this time, which was started by some cows from Chicago. The continued supervision apparently prevented the shipment of other diseased animals, however, as no other case has been traced to Chicago cattle. Still the work did not go on satisfactorily from January 1 to April 20, and it was confined to investigation and to efforts to prevent the extension of the disease, without any progress towards its extirpation.

The appropriation act approved March 3, 1887, not only increased the sum to be expended by the Bureau of Animal Industry from \$100,000 to \$500,000, but gave authority to purchase both diseased and exposed cattle, and made \$100,000 immediately available. The Chief of the Bureau was at once directed to proceed to Illinois and reach some understanding, if possible, with the governor and live-stock commission, by which the work in that State might be made efficient and the disease eradicated without further delay. At a conference between these gentlemen, held in Springfield, Ill., it was decided that it would be possible to resume harmonious co-operation under the following conditions: The Department of Agriculture would pay for the diseased and exposed animals that were slaughtered; a veterinarian, not previously stationed there, and having reputation and experience, would be placed in charge of the Department work; the force of the Department would be increased as required for the extermination of the plague; the separate offices previously maintained by the Department and the State commission would be consolidated; the State commission would do everything in its power to secure the rigid enforcement of the State law.

It was evident from the amount of the appropriation for the current year, and the authority accompanying it, that Congress intended not only that measures should be adopted to prevent the spread of pleuro-pneumonia from State to State, but also for the extirpation of the disease wherever it might exist. The rules and regulations previously prepared by me under section 3 of the act approved May 29, 1884, and already accepted by several States, were not entirely adapted to the most efficient exercise of this enlarged power. Accordingly new rules and regulations, as follows, were at once prepared and certified to the governors of all the States and Territories of the Union :

Rules and regulations of the United States Department of Agriculture, for the suppression and extirpation of contagious, infectious, and communicable diseases among the domestic animals of the United States.

[Prepared by the Commissioner of Agriculture.]

In pursuance of an act of Congress entitled "An act for the establishment of a Bureau of Animal Industry, to prevent the exportation of diseased cattle, and to provide means for the suppression and extirpation of pleuro-pneumonia and other contagious diseases among domestic animals," approved the 29th day of May, 1884, and of section 3 of said act, the following rules and regulations are hereby prepared and adopted for the speedy and effectual suppression and extirpation of contagious, infectious, and communicable diseases among the domestic animals of the United States.

RULES AND REGULATIONS.

1. Whenever it shall come to the knowledge of the Chief of the Bureau of Animal Industry of the Department of Agriculture that there exists, or there is good cause to believe there exists, any contagious, infectious, or communicable disease among domestic animals in any part of the United States, and he believes there is danger of such disease spreading to other States or Territories, he shall at once direct an inspector to make an investigation as to the existence of said disease.

2. Said inspector shall at once proceed to the locality where said disease is believed to exist and make an examination of the animals said to be affected with disease, and report the result of such examination to the Chief of the Bureau of Animal Industry.

3. Should the inspector on such investigation find that a contagious, infectious, or communicable disease exists among the animals examined, and especially pleuro-pneumonia, he shall direct the temporary quarantine of said animals, and the herds among which they are, and adopt such sanitary measures as may be necessary to prevent the spread of the disease, and report his action to the chief of the Bureau. He will further notify in writing the owner or owners, or person or persons in charge of such animal or animals, of the existence of the contagious disease, and that said animal or animals have been placed in quarantine, and warn him or them from moving said animal or animals under penalty of sections 6 and 7 of the act of Congress approved May 29, 1884.

4. When the chief of the Bureau of Animal Industry is satisfied of the existence of any contagious disease among domestic animals in any locality of the United States, and especially of pleuro-pneumonia, and that there is danger of said disease spreading to other States or Territories, he will report the same to the Commissioner of Agriculture, who will quarantine said locality in the mode and manner as provided in Rule 12. He shall cause a thorough examination of all animals of the kind diseased in said locality, and all such animals found diseased he will cause to be slaughtered. He shall establish a quarantine for a period of not less than ninety days of all animals that have come in contact with diseased animals, or have been on premises or in buildings on or in which diseased animals have been, or have been in any way exposed to disease; and shall make and enforce all such sanitary regulations as the exigencies of the case may require. He will cause to be disinfected in such manner as he deems best all sheds, corrals, yards, barns, and buildings in which diseased animals have been, and until such premises and buildings have been so disinfected and declared free from contagion by certificate in writing signed by an inspector of the Bureau of Animal Industry, no animal or animals shall be permitted to go upon or into said premises and buildings. Should, however, any animal or animals be put upon said premises or into said buildings in violation of this rule and regulation, then such animal or animals shall be placed in quarantine for a period of not less than ninety days, and said premises or buildings be again disinfected. Said second disinfection and the quarantine of said animals to be at the expense of the owner of said premises or buildings.

5. All animals quarantined by order of the Chief of the Bureau of Animal Industry shall have a chain fastened with a numbered lock placed around their horns, or in case of hornless animals placed around their necks; and a record will be kept showing the number of lock placed upon each animal, name and character of animal, and marks of identification, name of owner, locality, and date of quarantine. The Chief of the Bureau, however, may, in his discretion, in place of chaining said animals, cause the animals to be branded in such manner as he may designate, or may place a guard over the same.

6. All animals quarantined will be deemed and considered as "affected with contagious disease," and any person or persons moving said quarantined animals from the infected district will be prosecuted under sections 6 and 7 of the act of Congress establishing the Bureau of Animal Industry approved May 29, 1884.

7. Whenever in the judgment of the Chief of the Bureau of Animal Industry it becomes necessary to kill animals that have been exposed to the contagious disease known as pleuro-pneumonia in order to prevent the spread of said disease from one State or Territory to another, he shall cause the same to be slaughtered.

8. All animals diseased with pleuro-pneumonia, and all animals exposed to pleuro-pneumonia, that have been condemned to be slaughtered, shall be first appraised as to their value at the time of their condemnation. Said appraisalment shall be made in the mode and manner provided for by the law of the State in which they are located, and such compensation on their appraised value will be paid as is provided for by the law of such State. In case such State has no law for the appraisalment of the value of animals diseased with pleuro-pneumonia, or that have been exposed to pleuro-pneumonia, or either, then the Chief of the Bureau of Animal Industry shall direct an inspector of the Bureau to convene a board of appraisers to consist of three members, one of whom said inspector shall appoint, one to be appointed by the owner of the animal or animals condemned, and these two will appoint the third; in case the said owner shall neglect or refuse to name an appraiser, then by two appraisers to be appointed by said inspector. This board will appraise the value of the animals condemned and certify to the same in writing under oath, and the amount so fixed by said board shall be paid to the owner of the animals condemned. Should the owner of the animals condemned be dissatisfied with the appraisalment, he may appeal from said appraisalment to the circuit court of the United States, and the amount found by said court to be the value of the condemned animals will be paid to the owner.

9. Whenever it is deemed necessary by the Chief of the Bureau of Animal Industry to supervise and inspect any of the lines of transportation operating in the United States, that do business in and through more than one State, or connect with lines doing business in and through other States, and the boats, cars, and stock-yards in connection with the same, he shall designate suitable inspectors for that purpose, and make all necessary regulations for the quarantine and disinfection of all stock-yards, cars, boats, and other vehicles of transportation in which have been, or in which have been transported animals affected with a contagious disease or suspected to have been affected with such a disease. Such cars and other vehicles of transportation declared in quarantine shall not be again used to transport, store, or shelter animals or merchandise until certified to be free of contagion by a certificate signed by the inspector supervising their disinfection, and such stock-yards shall not again have animals placed in them until likewise declared free of contagion.

10. All quarantined stock, premises, and buildings will be under the charge and supervision of an inspector of the Bureau of Animal Industry, and shall be in no case free from quarantine until so ordered by the Chief of the Bureau.

11. Whenever any inspector of the Bureau of Animal Industry is prevented, or obstructed, or interfered with in the discharge of his duty in the examining of animals suspected to have a contagious disease, or in placing under quarantine animals or premises, or in disinfecting them, he will report the same to the Chief of the Bureau. He will also call upon the sheriff or other police authorities of the locality where said obstruction or interference occurs for aid and protection in the performance of his duty. Should such sheriff or police authorities neglect or refuse to render such aid and protection he will then apply to the United States marshal of said district for the necessary force and assistance needed to protect him in the carrying out of the duties imposed upon him by these rules and regulations and the provisions of the law by authority of which they are made. He will also file with the United States district attorney information of all the facts connected with such obstruction and interference and the names of the party or parties causing the same.

12. Should from any cause the Chief of the Bureau of Animal Industry find that it is impossible to enforce these rules and regulations in any State, and that in consequence thereof there is great danger that pleuro-pneumonia will spread from said State to other States and Territories, he will report the same to the Commissioner of Agriculture. Thereupon the Commissioner of Agriculture, if he believes the exigency of the case requires it, will declare said State, in which pleuro-pneumonia exists and in which it is impossible to carry out these rules and regulations, to be quarantined

against the exportation of animals of the kind diseased to any other State, Territory, or foreign country. Said order of the Commissioner declaring the quarantine of a State will be published in at least two papers in said State once a week during the existence of said quarantine, and in such other papers as he may select. Notification of the order declaring said quarantine will be certified to the governor of the State quarantined, as well as to the governors of all other States and Territories, and to the agents of all transportation companies doing business in or through said State. All animals of the kind quarantined against in said State will be deemed as animals "affected with contagious disease," and any person moving or transporting any of said animals to any other State or Territory, or delivering any of such animals to any transportation company to be so transported, will be prosecuted under sections 6 and 7 of the act of Congress approved May 29, 1884. Provided, however, that any animal of the kind quarantined against that has been examined by an inspector of the Bureau of Animal Industry and by a certificate in writing signed by such inspector declared to be free from pleuro-pneumonia, may be exported to any other State or Territory, and provided further that said animal shall be exported within forty-eight hours after such examination and signing of said certificate, so that said animal may not be exposed to disease before leaving said State.

13. Before giving the certificate provided for by Rule 12 the inspector must be furnished with an affidavit made by two reputable and disinterested persons, stating that they have known the animals to be examined for a period of six months immediately prior to the date of examination, and that during that time the animals have not been exposed to pleuro-pneumonia, that they have not been in any of the buildings or on any of the premises, or among any of the herds known to be affected with pleuro-pneumonia, or suspected to be so affected. The inspector may also require further proof as to whether said animals to be examined have been exposed to pleuro-pneumonia.

14. All rules and regulations heretofore made are hereby revoked, and these rules and regulations will be in full force and effect on and after the 15th day of April, 1887.

NORMAN J. COLMAN,
Commissioner of Agriculture.

These rules were accompanied by a certificate and request for co-operation, of which the following is a copy:

WASHINGTON, D. C., April 15, 1885.

I, Norman J. Colman, Commissioner of Agriculture, do hereby certify to the executive authority of the State of _____ the foregoing rules and regulations prepared by me for the speedy and effectual suppression and extirpation of contagious diseases among domestic animals of the United States, by virtue of section 3 of an act of Congress approved May 29, 1884, entitled "An act for the establishment of a Bureau of Animal Industry, to prevent the exportation of diseased cattle, and to provide means for the suppression and extirpation of pleuro-pneumonia and other contagious diseases among domestic animals," and I do hereby invite the executive authority of the State of _____ to co-operate in the enforcement and execution of said act and of these rules and regulations, made by authority of and in pursuance of the provisions of said act.

Commissioner of Agriculture.

To his excellency, _____

Governor of the State of _____.

The following form of acceptance was inclosed for the signature of the governors accepting the rules and regulations:

_____, 188____.
I, _____, governor of the State of _____, and chief executive officer thereof, do hereby acknowledge the receipt of the rules and regulations certified to by the Commissioner of Agriculture of the United States, as having been prepared by him April 15, 1887, in pursuance of the authority of section 3 of an act of Congress approved May 29, 1884, establishing the Bureau of Animal Industry, and further acknowledge the receipt of the invitation to the executive authority of the State of _____ to co-operate in the enforcement of the provisions of said act, and of said rules and regulations.

And on behalf of the State of _____, and by virtue of my authority as the chief executive officer thereof, I do hereby accept the rules and regulations prepared by the Commissioner of Agriculture, April 15, 1887, for the suppression and extirpation of contagious diseases of animals, and agree that the executive authority of the State of _____ will co-operate with the Bureau of Animal Industry in carry-

ing out the provisions of the act of May 29, 1884, to the full extent of its authority; and that I will direct the sheriffs and other peace officers of the State to render all necessary aid and assistance to the inspectors of the Bureau of Animal Industry in the performance of the duties imposed upon them by the said rules and regulations.

Governor of the State of _____,

Hon. NORMAN J. COLMAN,

Commissioner of Agriculture, Washington, D. C.

The governors of thirty-four States and Territories have accepted these rules and regulations and agreed to co operate with the Department in the extirpation of pleuro-pneumonia.

At this time, however, very few States had statutes authorizing the governors to accept such rules and regulations, and some of the governors were doubtful of their power to accept without a special authorization from the legislature. There were also many States which had no laws for the suppression of pleuro-pneumonia, or, having such laws, these were too defective for the enforcement of the proper measures to secure the prompt extirpation of the plague.

To overcome this deficiency in State legislation I suggested to the legislatures then in session a form of law which appeared to me well suited to overcome this emergency. This act was passed by the legislatures of New Hampshire, Massachusetts, Rhode Island, New York, and Virginia, in the following form:

AN ACT to co-operate with the United States in the suppression and extirpation of pleuro-pneumonia.

The people of the State of New York, represented in senate and assembly, do enact as follows: SECTION 1. The governor is hereby authorized to accept, on behalf of the State, the rules and regulations prepared by the Commissioner of Agriculture, under and in pursuance of section three of an act of Congress, approved May twenty-nine, eighteen hundred and eighty-four, entitled "An act for the establishment of a Bureau of Animal Industry, to prevent the exportation of diseased cattle, and to provide means for the suppression and extirpation of pleuro-pneumonia and other contagious diseases among domestic animals," and to co-operate with the authorities of the United States in the enforcement of the provisions of said act.

SEC. 2. The inspectors of the Bureau of Animal Industry of the United States shall have the right of inspection, quarantine, and condemnation of animals affected with any contagious, infectious, or communicable disease, or suspected to be so affected, or that have been exposed to any such disease, and for these purposes are hereby authorized and empowered to enter upon any ground or premises. Said inspectors shall have the power to call on sheriffs, constables, and peace officers to assist them in the discharge of their duties in carrying out the provisions of the act of Congress approved May twenty-nine, eighteen hundred and eighty-four, establishing the Bureau of Animal Industry; and it is hereby made the duty of sheriffs, constables, and peace officers to assist said inspectors when so requested; and said inspectors shall have the same powers and protection as peace officers while engaged in the discharge of their duties.

SEC. 3. All expenses of quarantine, condemnation of animals exposed to disease, and the expenses of any and all measures that may be used to suppress and extirpate pleuro-pneumonia shall be paid by the United States, and in no case shall this State be liable for any damages or expenses of any kind under the provisions of this act.

SEC. 4. This act shall take effect immediately.

This act was also passed by the legislature of Illinois with the following penalty clause:

SEC. 4. Any person violating any order of quarantine made under this act or any regulation prescribed by the Commissioner of Agriculture for the suppression of pleuro-pneumonia shall be guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than \$100 nor more than \$1,000, or by imprisonment for not more than six months, or both such fine and imprisonment.

In Maryland this work had been going on very harmoniously and successfully for about eight months under the rules and regulations of August 2, 1886, and the State authorities objected to any material change

in the status of co-operation, on the ground that they knew the old rules to be successful in that State, while the new ones might be regarded as more or less of an experiment. Some amendments, which appeared desirable to both parties, were consequently made to the old rules, and these in the amended form were then accepted by the governor and live-stock sanitary board on behalf of the State of Maryland and by the Commissioner of Agriculture on the part of the United States. The following is the text of the amended rules and regulations:

Rules and regulations for co-operation between the United States Department of Agriculture and the authorities of the State of Maryland for the suppression and extirpation of contagious pleuro-pneumonia of cattle.

INSPECTION.

1. The necessary inspectors will be furnished by the Bureau of Animal Industry of the Department of Agriculture.

2. The properly-constituted inspectors of the Bureau of Animal Industry who are assigned to this State are to be authorized by proper State authorities to make inspections of cattle under the laws of the State. They are to receive such protection and assistance as would be given to State officers engaged in similar work, and shall be permitted to examine quarantined herds whenever so directed by the Commissioner of Agriculture or Chief of the Bureau of Animal Industry.

3. All reports of inspections will be made to the Bureau of Animal Industry, and a copy of these will then be made and forwarded to the proper State authorities; when, however, any inspector discovers a herd infected with contagious pleuro-pneumonia, he will at once report the same to the proper State authority as well as to the Bureau of Animal Industry.

4. The inspectors, while always subject to orders from the Department of Agriculture, will cordially co-operate with State authorities, and will follow instructions received from them, provided they do not conflict with the rules and regulations of the Commissioner of Agriculture and instructions of the Chief of the Bureau of Animal Industry.

QUARANTINE.

5. When contagious pleuro-pneumonia is discovered in any herd, the owner or person in charge is to be at once notified by the inspector, and the quarantine regulations of the State are to be enforced from that time. The affected animals will be isolated, when possible, from the remainder of the herd, until they can be properly appraised and slaughtered.

6. To insure a perfect and satisfactory quarantine, a chain fastened with a numbered lock will be placed around the horns, or, with hornless animals, around the neck, and record will be kept showing the number of the lock placed upon each animal in the herd.

7. The locks and chains will be furnished by the Department of Agriculture, but they will become the property of the State in which they are used, in order that any one tampering with them can be proceeded against legally for injuring or embezzling the property of the State.

8. Quarantine restrictions once imposed are not to be removed by the State authorities without the consent of the proper officers of the Department of Agriculture.

9. The period of quarantining will continue at least ninety days after the removal of the last diseased animal from the herd, and will not be removed until the premises have been disinfected. During the whole period of quarantine no animal will be allowed to enter the herd or to leave it, and all animals in the herd will be carefully isolated from other cattle. Any person or persons violating quarantine regulations will be prosecuted under the laws of Maryland by the State authorities.

SLAUGHTER AND COMPENSATION.

10. All animals affected with or exposed to contagious pleuro-pneumonia are to be slaughtered as soon after their discovery as the necessary arrangements can be made, and the State veterinarian shall, upon the request of the inspector of the Bureau of Animal Industry in charge of the work, make the necessary order for the slaughter of exposed and diseased animals.

11. When diseased or exposed animals are reported to the State authorities, they shall promptly take such steps as they desire to confirm the diagnosis. The animals are to be appraised according to the provisions of the State law, and the proper offi-

cers of the Bureau of Animal Industry (who will be designated by the Commissioner of Agriculture) notified of the appraisement. If this representative of the Bureau of Animal Industry confirms the diagnosis and approves the appraisement, the Department of Agriculture will purchase the animals of the owner and pay for the same.

12. All slaughter shall be made on the premises where practicable, and the carcasses, blood, and offal of all diseased animals properly buried thereon. In no case shall driving of diseased or exposed animals over the public highway be permitted unless under supervision of an officer of the Bureau. Nor shall such animals be slaughtered at any slaughter-house where adequate provision is not made for the destruction of carcasses, offal, blood, and all infecting matters.

DISINFECTION.

13. All necessary disinfection will be conducted by the employés of the Bureau of Animal Industry.

INOCULATION.

14. No inoculation will be permitted.

15. The salaries and expenses of all the inspectors assigned to Maryland by the Bureau of Animal Industry, the compensation for all animals slaughtered under their direction, and all other necessary and authorized expenses shall be paid by the Department of Agriculture.

NORMAN J. COLMAN,
Commissioner of Agriculture.

ANNAPOLIS, MD., July 7, A. D., 1887.

I, Henry Lloyd, Governor of Maryland, do hereby approve of the foregoing amended rules and regulations, prepared under direction of Hon. Norman J. Colman, Commissioner of Agriculture, for the suppression and extirpation of contagious diseases of animals, and I agree to co-operate with the Bureau of Animal Industry in carrying out the same in this State.

HENRY LLOYD.

The governor of New Jersey did not formally accept the new rules and regulations, because he considered that he had no authority to do this in the absence of a statute authorizing him to take such action. This work had been for some years under the direction of the State board of health, and it was placed in the hands of the officers of the Bureau of Animal Industry to be carried on in accordance with the new rules by the consent both of the governor and of this board.

WORK IN ILLINOIS.

On April 20, 1887, Dr. James Law, professor of veterinary medicine and surgery in Cornell University, proceeded to Chicago and took charge of the work for the suppression of pleuro-pneumonia in Cook County, Ill., on behalf of the Department of Agriculture, and acting in the capacity of chief inspector of the Bureau of Animal Industry for Illinois. From this time the work was pressed vigorously forward. The cost of inspection, of tagging, and registering cattle, of maintaining quarantines, of disinfection, of compensation for slaughtered cattle, of clerical work in the office, of office rent, etc., was paid by the Bureau of Animal Industry. The State paid the expenses of the live-stock commission, of the State veterinarian, and of the appraisers.

Cook County was placed in quarantine May 24, by the publication in the newspapers and by sending a notice to the officers of the railroad and transportation companies. These notices were as follows:

UNITED STATES DEPARTMENT OF AGRICULTURE,
COMMISSIONER'S OFFICE,
Washington, D. C., May 24, 1887.

To the managers and agents of all railroad and other transportation companies throughout the United States, and other persons:

Notice is hereby given by publication, in pursuance of section 7 of an act of Congress approved May 29, 1884, entitled "An act for the establishment of a Bureau of Animal Industry, to prevent the exportation of diseased cattle, and to provide means

for the suppression and extirpation of pleuro-pneumonia and other contagious diseases among domestic animals," that a contagious, infectious, and communicable disease, known as pleuro-pneumonia, exists among cattle in the county of Cook, State of Illinois; that all cattle in said infected district are hereby quarantined until further notice, and deemed cattle "affected with a contagious disease," and all persons are prohibited from moving or transporting any cattle from said county of Cook, State of Illinois, to any other State or Territory of the United States, under penalty of sections 6 and 7 of the above entitled act: *Provided, however*, That any cattle that have been examined by an inspector of the Bureau of Animal Industry, and by said inspector are certified to in writing as being free of pleuro-pneumonia, may be transported to any other State or Territory from said infected district within forty-eight hours after being so certified to: *And provided further*, That said inspector is furnished with an affidavit made by two disinterested persons, stating that they have known said cattle for a period of six months immediately prior to the examination, and that during that time said cattle have not been exposed to pleuro-pneumonia. Said inspector may require further evidence that the cattle have not been exposed, and such proof as he requires must be given him.

The attention of all persons is called to section 6 and 7 of the act of Congress approved May 29, 1884, establishing the Bureau of Animal Industry, which sections make it a misdemeanor punishable by a fine of not less than \$100 nor more than \$5,000, or by imprisonment for not more than one year, or by both such fine and imprisonment, for any transportation company or person to receive for transportation, or to transport, or to drive, from one State or Territory to another any live stock affected with any contagious, infectious, or communicable disease, and especially pleuro-pneumonia; or for any person or persons to deliver such affected live stock to any transportation company.

A reward of \$100 will be paid to any person giving information to the Chief of the Bureau of Animal Industry that results in the conviction of any person for a violation of sections 6 and 7 of the act of Congress of May 29, 1884.

NORMAN J. COLMAN,
Commissioner of Agriculture.

UNITED STATES DEPARTMENT OF AGRICULTURE,
COMMISSIONER'S OFFICE,
Washington, D. C., May 24, 1887.

To the agents of ———— :

You will take notice that, in pursuance of section 7 of an act of Congress approved May 29, 1884, establishing the Bureau of Animal Industry, you are hereby notified that a contagious disease, known as pleuro-pneumonia, exists among cattle in the county of Cook, State of Illinois, in and through which infected district your company is doing business. Said district is hereby declared in quarantine until further notice, and you are hereby directed not to receive for transportation, nor to transport, any cattle from said county, in said State, to any other State or Territory, unless such cattle have first been examined and inspected by an inspector of the United States Bureau of Animal Industry, and said inspector gives a certificate in writing that the cattle examined are free from the contagious disease known as pleuro-pneumonia, and have not been exposed to such disease, in which case said cattle so certified to may be transported from said district within forty-eight hours from the time of examination, and not otherwise. Before examining cattle to certify for transportation the inspector must be furnished with an affidavit, made by two disinterested persons, stating that they have known the cattle for a period of six months just prior to the examination, and that such cattle have not been exposed to pleuro-pneumonia; that they have not been in any of the buildings, or on any of the premises, or among any of the herds that have been specially quarantined in said district. The inspector may require other proof that the cattle have not been exposed to pleuro-pneumonia, which must be furnished before he gives the certificate.

Provided, however, until further notice, that cattle offered for shipment from the Union stock-yards at the city of Chicago, Cook County, Ill., may be received and transported without examination and without the certificate above prescribed. Nothing, however, in this proviso to exempt parties making such shipment from the penalty for shipping or offering for shipment cattle affected with pleuro-pneumonia, or cattle from said Cook County, Ill.

Your attention is directed to sections 6 and 7 of the act of Congress approved May 29, 1884, establishing the Bureau of Animal Industry, which sections make it a misdemeanor, punishable by a fine of not less than \$100 nor more than \$5,000, or by imprisonment for not more than one year, or by both such fine and imprisonment, for any railroad company to receive for transportation, or to transport from one State or Territory to another, any live stock affected with any contagious, infectious, or com-

municable disease, and especially with the disease commonly known as pleuropneumonia, or for any person or persons to deliver such affected live stock to any transportation company.

Your attention is also called to the rules and regulations prepared by the Commissioner of Agriculture, by virtue of the authority conferred upon him by section 3 of the aforementioned act, and especially to the sixth, ninth, and twelfth rules, a copy of said rules and regulations being herein inclosed.

NORMAN J. COLMAN,
Commissioner of Agriculture.

It will be seen that there was a special exception in regard to the Union Stock Yards. There was no evidence that these yards had ever been infected. An agreement was made with the managers that no cattle were to be received from Cook County, and a guard was also established to make certain that this agreement was carried out. Under these conditions it appeared perfectly safe to allow the traffic and interstate commerce passing through these yards to go on without molestation.

Under the same date similar notices were made in reference to Westchester, New York, Kings, Queens, Suffolk, and Richmond Counties in the State of New York; and Baltimore, Howard, Carroll, and Prince George's Counties in the State of Maryland.

To return to the work in Illinois: Beginning with April 20, every bovine animal in the infected district was numbered by a metal tag placed in the ear; this number was so recorded that by means of a double index the animal could be easily located either by knowing the number or the owner's name. *Post mortem* examinations were made of all cattle from this district which were slaughtered or which died from natural causes. In this way nearly every herd affected was soon located. As no animals in this district could be moved without a permit, there was no serious difficulty in carrying out these regulations. In addition to this, every herd in which the disease was found, and every herd which was known to have been exposed to it, were slaughtered in the presence of our inspectors.

Every stable in which a diseased or suspicious animal was found was disinfected in the most complete manner by a special corps of men organized and instructed for this work.

As a result of these thorough measures the extension of the plague was soon checked, and for the past six months, or since July 28, there have been no fresh or acute cases developed. There have, however, been a considerable number of chronic cases found since that time, and the object of the continued supervision has been to discover and slaughter all of these as the only sure precaution against a new outbreak of the trouble.

It was the intention to remove all quarantine restrictions in Illinois by January 1, 1888, but the frequent discovery of lesions in the lungs of slaughtered cows which, while not pathognomonic of pleuropneumonia, might have been produced by it, led me to postpone this action. On December 29 an undoubted case of chronic pleuro-pneumonia, with encysted lung tissue, was discovered. From an inquiry which I at once made as to how this case could have escaped the general slaughter of exposed cattle that I supposed had been completed, I learned that about 300 cows in the infected district had been allowed to remain, on the belief that they had not been exposed. It was one of these animals, slaughtered by the desire of the owner, in the presence of one of our inspectors, which revealed the existence of disease. The remainder of the herd was at once slaughtered and the stable thoroughly disinfected. The quarantine restrictions will now be enforced until April 1, and in the mean

time the remainder of the cattle that were in this district at the time the malady prevailed will be slaughtered, and I hope in this way to prevent any further extension of the quarantine.

From January 1 to December 31, 1887, inclusive, 7,411 herds and premises were inspected in Cook County, Ill., containing 24,059 head of cattle. *Post mortem* examinations were made on 7,267 animals, which were either slaughtered or had died from disease, and among these 350 were found affected with pleuro-pneumonia. The total number of cattle slaughtered in Illinois during this time for which compensation was made by the Department was 1,042. Of these, 172 were diseased and the owners received for them \$3,179.53, an average of \$18.42 for each animal, and 870 were exposed and the owners were paid for them \$14,153.21, an average of \$16.27. The average compensation for the exposed animals is less than for the diseased, for the reason that the value of the carcass was paid by the butcher to the owner, and this amount was deducted from the appraisement, and the owner was paid the difference as compensation from this Department.

There were disinfected in Cook County during the year 677 stables. Some of these were very large, and the work required the constant labor of the disinfecting corps of eight men. The method of disinfecting was to first thoroughly clean the buildings, removing all litter, manure, loose earth, and rotten wood, and then to cover with a mixture of chloride of lime and whitewash. This was applied by means of a powerful force-pump, worked by the members of the disinfecting corps.

The total expenses in Illinois on account of this outbreak, from about September 1, 1886, to December 31, 1887, were \$73,991.96. Of this sum, \$17,332.74 was paid as compensation for slaughtered cattle. Miscellaneous expenses, including disinfecting material and apparatus, tags, and rings for inserting the same, record books, office rent, etc., amount to \$3,952.52. Traveling expenses of inspectors and other employes, a part of which was for investigating reported outbreaks of disease in the country for a considerable distance around Chicago, amounted to \$3,598.99. The remainder was paid for the services of the inspectors, deputy sheriffs, disinfecting corps, and for clerical assistance in the office, amounting to \$49,107.71. The amount paid for cattle was to all other expenses as 1:3.3.

The large proportional expenses for salaries is due to the fact that from October 1, 1886, to April 20, 1887, no cattle were paid for by the Department, but a large force was kept in the field investigating as to the prevalence of pleuro pneumonia about Chicago, the size of the district that was infected, in guarding infected stables, and in serving quarantine notices for the State authorities. As the State appropriation was acknowledged on all sides to be too small to cope with the emergency the Department of Agriculture assumed all of the expense which it could in order that the State funds might be used for the slaughter of cattle.

Between two and three thousand head of cattle in the distillery stables and on the Harvey farm were quarantined by the State authorities at a nominal cost, and the animals were slaughtered by the State before the Bureau of Animal Industry was given authority to expend money for this purpose. Neither this quarantine, therefore, nor the compensation for the animals appear in this report, and yet the quarantine was maintained for sixty days by guards paid by the Bureau at an expense of about \$100 a day. Of course cattle when in large herds can be quarantined and slaughtered at relatively small expense for salaries, but when in small lots and scattered over a large territory, or when a constant guard must be maintained, this expense is greatly increased.

Again, since the slaughter of exposed cattle was suspended, there has been a period of watching and investigation to make sure that every vestige of the disease had been destroyed. The period during which the active slaughter of cattle was in progress, and the compensation paid by the Department, was but little over six months, while the total period during which it has been necessary to keep a force in the field has been fifteen months. Finally, the expenses for disinfection have been very heavy, and this is the only outbreak in which any systematic and thorough disinfection has been practiced in the United States by the authorities up to the time the disease was eradicated. If these facts are taken into consideration, they will explain the preponderance of salaries and other expenses over the amount paid for slaughtered cattle.

WORK IN MARYLAND.

Baltimore County, Md., has long been acknowledged to be one of the worst infected localities in the United States. The plague has been very prevalent there, affecting nearly every herd in Baltimore and vicinity and extending for a considerable distance into the country. The contagion has existed in the stables and pastures there for so long a time that they are saturated with it, and in many cases it is extremely difficult to secure their thorough disinfection. The work there has, consequently, been as difficult as it is possible for such work to be. Pleuro-pneumonia was also found to exist in the counties of Anne Arundel, Carroll, Howard, and Prince George's, in the same State. The affected herds in all these counties, with the exception of Baltimore, were immediately slaughtered, and the plague was at once eradicated.

In city districts it is much more difficult to discover affected herds. The owners are often ignorant, with no knowledge of the law, or having such knowledge they conceal the disease. It is therefore only by constant watching and thorough supervision of the movement of animals that the diseased herds are discovered. Until November 10, 1887, the State live-stock sanitary board were unwilling to quarantine all herds in Baltimore and require that no cattle should be moved from one premises to another or allowed upon any vacant lot or highway without a permit. Their reasons for not making such an order were, first, that they thought the disease could be eradicated without these stringent regulations; and, secondly, they doubted their ability to enforce it.

An order was issued, however, which took effect November 10, quarantining all bovine animals within 6 miles of the City Hall of Baltimore, and prohibiting any movement of cattle within this district without a permit. The order is as follows:

SPECIAL QUARANTINE REGULATIONS.

Whereas the disease known as contagious pleuro-pneumonia now exists as an epizootic among cattle in the city of Baltimore, and portions of the county of Baltimore, in the State of Maryland:

Therefore, in order to prevent the further spread of said contagion, I, Robert Ward, chief veterinary inspector of Maryland, and the State live-stock sanitary board, by virtue of the powers conferred on us by the act of the general assembly of Maryland passed at the January session, 1884, chapter 157, as amended by the act of 1886, chapter 80, do hereby place in quarantine all premises and animals within a radius of 6 miles from the city hall, in Baltimore City, and give notice:

1. That all persons are prohibited from moving, within the territory aforesaid, from one premises to another, or over any public highway, or unfenced lot or piece of ground, or from bringing into or taking from said territory any animal or animals of the bovine species, except upon obtaining a special permit signed by the chief veterinary inspector for Maryland. All persons are hereby prohibited from driving any animal

or animals of the bovine species out of or into the territory aforesaid except upon obtaining a special permit as above provided. No restrictions, however, are placed upon the movement of bovine animals by rail passing through the county of Baltimore, nor upon steers shipped to either of the stock-yards and intended for immediate slaughter.

2. The grazing or exposure of animals of the bovine species upon any street, road, lane, or alley, or upon any unfenced lot or piece of ground in the territory aforesaid, is strictly prohibited.

These regulations to take effect on and after the 10th day of November, A. D., 1887.

All sheriffs, deputy sheriffs, constables, and policemen are requested to assist in the enforcement of these regulations.

Done this 24th day of October, A. D., 1887.

ROBERT WARD,

Chief Veterinary Inspector of Maryland.

By order of State Live Stock Sanitary Board :

T. ALEX. SETH, *Secretary.*

NOTICE TO CATTLEMEN AND DEALERS.

The following additions to the special quarantine regulations of October 24, 1887, are hereby promulgated and made part thereof, by virtue of the powers therein referred to :

1. By agreement with the State weigher, the four yards at the northwest corner of the State scales pens are set apart for the exclusive use of local cattle intended for immediate slaughter. Cattle for sale for immediate slaughter will be admitted by permit to these pens, and can be taken by permit direct to the place of slaughter. These yards must be entered by Garrison Road (Butcher's Lane).

2. No cattle from any portion of the quarantined area, extending 6 miles from the City Hall of Baltimore, will be admitted to any other of the State scales pens, nor to the Calverton nor Clairmount stock-yards.

3. All cattle, from whatever source, that have once entered the above-named four yards for local butcher cattle must be sent direct to slaughter and nowhere else. Cattle from these pens may be weighed on the western set of scales, to which no other cattle, except those intended for immediate slaughter, will be admitted.

4. Cattle from the counties of Howard, Carroll, Prince George's, and that part of Baltimore County outside of the specially quarantined area extending 6 miles from Baltimore City Hall, may be transported to State scales, or either of the stock-yards, as if from unquarantined districts, provided they are accompanied by the special permit and affidavits required for cattle when going out of the State.

5. Persons driving cattle from outside counties to the Baltimore market must procure a permit before coming within the 6-mile quarantine limit, otherwise they must go into the four pens above designated for butcher cattle.

6. All cattle coming by rail from the quarantined district of this State, outside the 6-mile limit, must be unloaded at the Calverton quarantine yards, unless they are accompanied by the special permit, with affidavits, as required above.

7. The Clairmount Stock Yards, the Calverton Feeding Pens, and that portion of the State Scales Pens, other than those named above, as reserved for local butcher cattle, must be reserved for the exclusive use of cattle coming by rail from the non-quarantined counties of Maryland and from other States.

Dr. ROBERT WARD,

Chief Veterinary Inspector of Maryland.

Approved :

STATE LIVE-STOCK SANITARY BOARD,

T. ALEX. SETH, *Secretary.*

To butchers and owners of glue factories and rendering works. To all receivers of dead animals.

SIR: To discover each center of lung plague infection it is necessary that every bovine animal dying within the quarantined district extending 6 miles outward from the City Hall should have its lungs examined by a government inspector.

You are therefore ordered not to receive at your factory or works, or for conveyance thereto, any dead cattle, young or old, unless accompanied by a permit signed by

the chief veterinary inspector of Maryland, and to hold such dead cattle without opening them or removing any chain, lock, or tag from the carcass until such inspector is present.

DR. ROBERT WARD,
Chief Veterinary Inspector of Maryland.

Approved:

STATE LIVE-STOCK SANITARY BOARD,
T. ALEX. SETH, *Secretary.*

NOTICE TO COW DEALERS IN THE BALTIMORE DISTRICT.

All persons dealing in cows or other cattle within the Baltimore quarantined district, extending 6 miles in all directions from the City Hall, must reserve their stables for the reception of cattle from outside of said district. Cattle from healthy districts may be moved to the dealers' stables upon procuring the necessary permit, and may then by permit be moved to the stables of the buyer, but they can not again be moved from stable to stable. Cattle dealers wishing to trade fresh cows for fat or dry ones will be granted permits to take such fat or dry cows direct to slaughter, or to the quarantine pens at the State scales, but not to their own stables.

Peddling cows is strictly prohibited.

DR. ROBERT WARD,
Chief Veterinary Inspector of Maryland.

Approved:

STATE LIVE-STOCK SANITARY BOARD,
T. ALEX. SETH, *Secretary.*

The work of the Bureau in Maryland is progressing very satisfactorily under these regulations. The State veterinarian and the live-stock sanitary board have co-operated very cordially in enforcing them, and have done much to secure their efficiency. No bovine animal can be moved from or to any premises in the city of Baltimore without having been inspected by a veterinarian in the employ of the Bureau; every cow that dies in any herd in that city is known to these inspectors and is examined as to the cause of its death; every bovine animal in that district is numbered, and its number and the herd to which it belongs is recorded. It is impossible, therefore, for the disease to exist in a herd for any considerable time before its presence there is detected.

About all of the old infected herds have been destroyed, and the cases which are now found are due to recent infection. Such cases are becoming fewer, and it is believed that this decrease will continue and become more apparent with each month in the future.

From January 1 to December 31, 1887, there were inspected in Maryland 5,704 herds, containing 57,858 head of cattle. *Post-mortem* examinations were made on 2,788 animals, of which 1,137 were found to be affected with pleuro-pneumonia. The total number of stables disinfected was 145. The number of animals affected with pleuro-pneumonia slaughtered in Maryland since July 1, 1886, is 1,442, and of exposed animals (all slaughtered since March 3, 1887), 1,564, making a total of 3,006. The owners received from the Department as compensation for the diseased animals \$33,759.01, an average of \$23.41 per head; for the exposed animals they received \$41,397.71, an average of \$26.46 per head.

The total expenses in Maryland in the work of suppressing pleuro-pneumonia from July 1, 1886, to December 31, 1887, were \$105,883.81. Of this sum \$75,156.72 was paid as compensation for slaughtered cattle. The miscellaneous expenses, including disinfection, locks and chains, tags, record books, etc., were \$1,170.16. Traveling expenses amounted to \$9,430.49. The total amount paid for salaries was only \$20,126.44. The amount paid for cattle was to all other expenses as 1 to 0.41.

We have, with the expenses in Illinois and Maryland, two extremes in the proportion of the amount paid for cattle to that paid for all other

purposes. The reason for the large relative expense for salaries in Illinois has been given. The reasons for the small relative expenditures for salaries in Maryland are the large number of affected herds in Baltimore County, which made it easy to find great numbers of affected and exposed cattle; the fact that the work of slaughtering has been continued without intermission, there being no period of investigation covered before the slaughtering began or after it was finished; the small size of the force, which for the most of the time has been insufficient to properly control the movement of cattle. The last reason mentioned was due to the authority given by the State not being sufficient to allow the supervision of the movement of cattle until after November 10, 1887, and, consequently, it would have been a waste of money to increase the force. Since the order of November 10 was made, the number of men employed in Maryland has been largely increased, and the relative expenditure for salaries and other expenses will soon be greater than for cattle; but the efficiency of the work has been greatly improved, and the extirpation of the disease will cost less money than if the work were done with a smaller force.

A relatively small expenditure for salaries is therefore no indication either of the efficiency or the economy of the work for the suppression of pleuro-pneumonia. We might have gone on for years in Maryland with twice the expenditure for cattle that was made for all other purposes, but while the prevalence of the plague could have been diminished the contagion could not have been eradicated. To accomplish this result, men must be employed to watch the movement of cattle, and to give permits by which they can be traced, to guard the stock-yards and other cattle markets, and prevent the entrance of diseased animals, to make *post mortem* examinations on all animals which die or are slaughtered from the infected district, to investigate all reported outbreaks of disease, and to disinfect all premises where the contagion has existed. This system is undoubtedly expensive in the way of salaries, but it is the only way to eradicate the plague, and in the end it is far more economical than any attempt to control the disease with an inadequate force.

NEW JERSEY.

In New Jersey the work has been steadily progressing. The State is believed to be free from pleuro-pneumonia, with the exception of Hudson County and possibly one or two other adjoining counties. The country districts have been cleared of the contagion wherever it has been discovered. The regulations are now being made and the force organized to establish quarantine and complete control of the movement of cattle in Hudson County, and particularly in Jersey City. So far as our information goes, this is the only county in which there remains any considerable amount of disease.

From January 1 to December 31, 1887, there were inspected in New Jersey 1,428 herds of cattle, containing 16,461 animals. *Post-mortem* examinations were made on the carcasses of 248 animals, of which 113 were found affected with pleuro-pneumonia. The total number of animals slaughtered in New Jersey because affected with this disease was 94, and the number slaughtered for exposure was 117, making a total of 211. The owners received from the Department as compensation for the diseased animals \$2,275, an average of \$24.20 per head; and for the exposed animals \$3,216, an average of \$27.48 per head.

The total expenses in New Jersey for the suppression of pleuro-pneumonia have been, to December 31, 1887, \$12,146.03. Of this sum, \$5,491

was paid as compensation for slaughtered cattle. The miscellaneous expenses were \$199.33; the traveling expenses, \$1,813.43; and the salaries, \$4,642.27. The amount paid for cattle was to all other expenses as 1 to 1.2.

NEW YORK.

During the year the two interior counties of Washington and Delaware were found to be infected with pleuro-pneumonia, and although the contagion had been introduced into a considerable number of herds it was promptly eradicated. Very much more of the disease has been found in Westchester County than was anticipated, and more work has been done there than elsewhere in the State. Supervision has been maintained, however, in New York and Kings County, and a number of diseased herds were slaughtered in each. After the withdrawal of Professor James Law from Chicago, or about December 1, he was placed in charge of the work of the Bureau of Animal Industry in the whole State. By orders of the governor of New York it has been possible to maintain quarantines and to establish all necessary regulations for the extirpation of the disease. These orders are as follows:

[Order.]

STATE OF NEW YORK, *Executive Chamber*:

In pursuance of the authority vested in me as governor of the State of New York by chapter 134 of the Laws of 1878, entitled "An act in relation to infectious and contagious diseases of animals," I do hereby prescribe the following regulations for the suppression of contagious diseases among domestic animals and the prevention of the spread of the same:

The local boards of health throughout the State shall report to me at once the breaking out of any contagious disease among the domestic animals in their respective districts, and especially of contagious pleuro-pneumonia among cattle. They shall likewise notify at the same time the chief inspector of the Bureau of Animal Industry of the United States at Washington, D. C., of the appearance of contagious pleuro-pneumonia.

When contagious pleuro-pneumonia exists in any portion of the State of New York the Bureau of Animal Industry of the United States will take charge of the work of suppressing the disease and preventing its spread, as provided by chapter 155 of the Laws of 1887, entitled "An act to co-operate with the United States in the suppression and extirpation of pleuro-pneumonia."

The inspectors of the said Bureau of Animal Industry shall place in quarantine all animals affected with contagious pleuro-pneumonia or that have been exposed to contagious pleuro-pneumonia, and all premises infected or believed to be infected with the contagion of said disease. All persons are hereby prohibited from moving quarantined animals from the premises where quarantined, and all persons are prohibited from placing on said premises or among said animals quarantined any healthy animals of the kind among which the contagion of said disease exists.

Whenever the chief inspector of Animal Industry finds that contagious pleuro-pneumonia exists among the herds in any county of this State, and believes there is danger of its spreading to other counties, he shall give notice of the existence of said contagion in a county by publication once a week in at least one newspaper published in said county, and warn all persons from moving any animals of the kind diseased to any other county of the State. He shall likewise notify in writing an agent of each transportation company doing business in said county, and warn said company from transporting any animals of the kind diseased from said county to any other county in the State without a permit from an inspector of the Bureau of Animal Industry. All persons are hereby prohibited from driving or transporting by rail or water or vehicle of any kind, or offering for shipment, any animal of the kind diseased from any county in which contagious pleuro-pneumonia is declared to exist by the chief inspector of the Bureau of Animal Industry, in the manner herein provided, to any other county in the State; provided, however, that animals may be transported to other counties when a permit is given therefor by an inspector of the Bureau of Animal Industry.

All railroads doing business in a county infected with contagious pleuro-pneumonia shall cause their stock-yards, pens, and stock-cars to be cleansed and disinfected in

such manner as may be directed by an inspector of the Bureau of Animal Industry, and under the supervision of said inspector.

Given at the capitol in the city of Albany, this 10th day of August, in the year of our Lord 1887.

[L. s.]

By the Governor:

WILLIAM G. RICE,

Private Secretary.

DAVID B. HILL.

[Order.]

STATE OF NEW YORK, *Executive Chamber*:

In pursuance of the authority vested in me as governor of the State of New York by chapter 134 of the laws of 1878, entitled "An act in relation to infectious and contagious diseases of animals," I do hereby prescribe the following supplemental regulations for the suppression of contagious diseases among domestic animals and the prevention of the spread of the same:

Whenever the chief inspector of the Bureau of Animal Industry shall have given notice as required by executive order of August 10, 1887, of the existence of contagious pleuro-pneumonia, or of the existence of the contagion of that disease, in any county of this State, it shall thereafter be lawful for said chief inspector, in his discretion, to cause all neat cattle in such county to be numbered, tagged, and registered, and all persons are hereby prohibited, after notice given as aforesaid, from moving any such cattle, or allowing any such cattle to stray from any place or premises to any other place or premises, and from allowing any such cattle to be upon any highway or upon any uninclosed land without a permit duly issued and signed by an inspector of the said Bureau, and from and after notice given as aforesaid all persons keeping cattle in any such county are hereby required to give immediate notice to an inspector of the said Bureau of the sickness or death of any cattle belonging to them or in their possession, and also of all births that may occur in their herds and of all other additions thereto, and from and after notice given as aforesaid all persons are hereby prohibited from offering or receiving within any such county any cattle for transportation or removal in any manner whatever and from transporting any cattle in any manner, whether from any place in such county to another place within the county or to a place out of the county, without a special permit duly issued and signed by an inspector of the said Bureau.

Given at the capitol, in the city of Albany, this eighth day of December, in the year of our Lord one thousand eight hundred and eighty-seven.

[L. s.]

By the governor:

WILLIAM G. RICE,

Private Secretary.

DAVID B. HILL.

A force has just been organized in the counties of Westchester, New York, Richmond, Kings, and Queens sufficiently large to tag and register all bovine animals in these counties. The cattle have been quarantined and all movement prohibited unless a permit is first obtained from an inspector of this Department. This system is now (January 26) beginning to work smoothly, and within the next week or two the whole district will be under thorough supervision.

From January 1 to December 31, 1887, there were inspected in New York 1,511 herds of cattle, containing 25,122 animals. *Post-mortem* examinations were made upon 1,347 animals, and of these 447 were found to be affected with pleuro-pneumonia. The total number of animals slaughtered in New York because affected with this disease was 266, and the number slaughtered for exposure was 736, making a total of 1,002 head. The owners received from the Department as compensation for the diseased animals \$6,317.25, an average of \$23.75 per head: and for the exposed animals \$15,577.41, an average of \$21.16 per head.

The total expenses in New York for the suppression of pleuro-pneumonia have been, to December 31, 1887, \$30,632.49. Of this sum

\$21,894.66 was paid as compensation for slaughtered cattle. The miscellaneous expenses were \$156.95; the salaries, \$6,036.85; the traveling expenses were \$2,544.03. The amount paid for cattle was to all other expenses as 1 : 0.39.

In New York the work has been under substantially the same conditions as in Maryland, with many large herds infected and these easily found, and until recently without any attempt to supervise all movement of cattle within the infected counties. The relation of the different items of expenditure was also very much the same in the two cases.

In New York there has been a market for the carcasses of exposed animals, and, therefore, the compensation paid for such animals was less than for the diseased ones. In New Jersey the law is such that it is, as a rule, impracticable to utilize the carcasses of exposed cattle, and hence the average compensation for these has been greater than for the diseased ones. Taking these variable conditions into consideration it will be observed that the various items of expenditure correspond quite closely in the different States.

To increase the facility of comparison the following table is added :

*Table showing the work of the Bureau of Animal Industry for the suppression of pleuropneumonia.**

	Illinois.	Maryland.	New Jersey.	New York.	Total and average.
Herds inspected	7,411	5,704	1,428	1,511	16,054
Cattle inspected.....	24,059	57,853	16,461	25,122	123,500
Post-mortem examinations	7,267	2,783	248	1,347	11,650
Found diseased on <i>post-mortem</i>	350	1,137	113	447	2,047
Diseased cattle slaughtered with compensation	172	1,442	94	266	1,974
Exposed cattle slaughtered with compensation	870	1,564	117	736	3,287
Total compensation for diseased cattle..	\$3,179.53	\$23,759.01	\$2,275.00	\$6,317.25	\$45,330.79
Average compensation for diseased cattle	\$18.42	\$23.41	\$24.20	\$23.75	\$23.06
Total compensation for exposed cattle..	\$14,153.21	\$41,397.71	\$3,216.00	\$15,577.41	\$74,344.33
Average compensation for exposed cattle	\$16.27	\$26.46	\$27.48	\$21.16	\$22.61
Salary expense	\$49,107.71	\$20,126.44	\$4,642.27	\$6,036.85	\$79,913.27
Traveling expenses	\$3,598.99	\$9,430.49	\$1,813.43	\$2,544.03	\$17,386.94
Miscellaneous	\$3,952.52	\$1,170.16	\$199.33	\$156.95	\$5,478.96
Total	\$73,991.96	\$105,883.81	\$12,146.03	\$30,632.49	\$222,654.29
Ratio between amount paid for cattle and all other expenses	1 : 3.3	1 : 0.41	1 : 1.2	1 : 0.39	1 : 0.85

* The slaughter of affected cattle and expenses in some States are from July 1, 1886. The salaries, traveling, and miscellaneous expenses in Illinois are from September 1, 1886. All other items, with trifling exceptions, are from January 1, 1887, and all are brought up to December 31, 1887.

DISTRICT OF COLUMBIA.

It was known that pleuro-pneumonia existed to a considerable extent in the District of Columbia within the last three or four years, but the inspections and supervision of the inspectors of the Bureau of Animal Industry, together with the activity of the health department, led to its disappearance. To determine definitely as to whether the contagion was still affecting any herds, the Commissioners of the District, at my request, issued an order authorizing the inspectors of the Bureau to make an examination of all cattle in the District. The inspectors were at once placed in the field, and have gone over the whole District, examining carefully all the cattle that were found. Their reports show the inspection of 798 herds, containing 3,268 animals, in none of which was pleuro pneumonia found. As a careful inquiry has also been made in the counties of Maryland which adjoin the District without discovering the plague, it may be safely concluded that this section is now free from it.

VIRGINIA.

A thorough inspection has also been made during the year in those parts of Virginia where pleuro-pneumonia has been reported in past years. The inspections covered the careful examination of 3,753 head of cattle contained in 353 different herds. In none of these was the plague discovered.

Within a few days a large herd has been reported as affected, and a single *post-mortem* examination indicates that the disease is pleuro-pneumonia, though a further investigation will be made before a decision is reached.

PENNSYLVANIA.

The State authorities of Pennsylvania have not accepted the rules and regulations of the Department of Agriculture, nor have they agreed to co-operate with the Department for the suppression of pleuro-pneumonia. They have, however, expressed a willingness to have the inspectors of the Department make an investigation of alleged outbreaks of the disease, and of its prevalence in any part of the State. Two inspectors were detailed for such investigation in the month of October, 1887, and have been steadily at work there since that time. They have found no herds affected with the plague except such as were known to the State authorities, and there are at this time but very few of these.

There has been much anxiety felt in many parts of the country in regard to the existence of pleuro-pneumonia in Pennsylvania. It would appear from the official information obtained by this Department that the extent of the disease in that State has been greatly overestimated. Unfortunately, the authorities in charge of this work in Pennsylvania have opinions as to the measures necessary to eradicate the disease which are not shared by the authorities of other States, or by the majority of the veterinary profession. They not only practice inoculation, but they spare those animals which are mildly affected, and after the ordinary period of quarantine allow them to mingle again with other cattle and to be sent to the markets of that or other States. Such inoculated and convalescent cattle are almost universally regarded as dangerous and capable of communicating the contagion to others for an indefinite period. So much alarm has been expressed because of the danger of the plague being spread by these cattle that the Department has offered to purchase and slaughter without cost to the State all exposed animals which the local authorities were unwilling to destroy at State expense. A favorable reply was made to this proposition, but no action has been taken on it, and I learn that it is proposed to soon release from quarantine the affected herds at Frankford, in which it is alleged there still exist chronic cases of the malady.

It would appear from these facts that there should be some provision in the national law which would enable this Department to protect other States in such cases more perfectly than is at present possible.

MASSACHUSETTS.

Early in the year the discovery of cases of acute pleuro-pneumonia was reported from Boston, and the Department was requested by the governor to assist the State board in investigations as to its prevalence and in the enforcement of measures for its eradication. Inspectors were at once sent there, who found that the affected animals had recently been shipped there from Buffalo, N. Y., and it appeared that they had either come to Buffalo from Chicago or had mingled there

with cows from Chicago. A thorough inspection and supervision of the dairies about Boston was kept up for several months, and particularly of the herds in which had been introduced those animals which came in the same car with the affected ones. Fortunately but few cases occurred, and it was only found necessary to destroy a very small number of animals.

CONNECTICUT.

The authorities of Connecticut have also failed to accept the rules and regulations of the Department, partly no doubt because there has been but very little pleuro-pneumonia in the State. There is now one affected herd in quarantine, and one other that is quarantined as suspicious. Correspondence is now in progress in reference to the affected herd and it will probably be purchased and slaughtered by the Department within a short time.

CONCLUDING REMARKS.

The progress of the work for the extirpation of pleuro-pneumonia during the last year has been extremely satisfactory. This disease has been eradicated from Illinois, from two counties in New York, from two counties in New Jersey, and from three counties in Maryland. It is now almost, if not quite, confined to five counties in New York, two counties in New Jersey, and one county in Maryland, in all of which active work is in progress. There are outside of these counties one herd in Connecticut, two herds in Pennsylvania, and one herd in Virginia believed to be diseased and which are in quarantine.

Compared with the situation when the Bureau of Animal Industry was established the present condition is certainly very reassuring. In 1884 pleuro-pneumonia existed in two counties in Ohio, in five counties in Illinois, one county in Kentucky, and early in 1885 in one county in Missouri. At that time or since it has existed in one county in Massachusetts, eight counties in New York, seven counties in New Jersey, one county in Delaware, five counties in Maryland, two counties in Virginia, and in the District of Columbia. It has also existed in several counties in Pennsylvania, in reference to which the Department has not complete information. The work necessary to eradicate the disease in Westchester County, N. Y., and in Baltimore County, Md., has probably been more than half completed in each case.

In the counties of New York, Kings, and Queens, in the State of New York, and in Hudson County, N. J., there will be a large amount of very expensive work to do. There is every reason to believe, however, that this work can be practically completed and the plague exterminated by the end of the next fiscal year, if it can be carried on under the same authority and with no greater obstacles than have been encountered up to this time.

Owing to the apprehension existing as to the danger of pleuro-pneumonia being disseminated by cars in which diseased cattle had been transported, the following circular in reference to disinfection was prepared and sent to transportation companies, and has been very generally observed :

U. S. DEPARTMENT OF AGRICULTURE,
COMMISSIONER'S OFFICE,
Washington, D. C., May 31, 1887.

To the managers of all railroads and transportation companies in the United States :

Your attention is called to the fact that contagious pleuro-pneumonia exists among cattle in the States of Illinois, Maryland, and New York, and that the infected districts in said States have been duly quarantined by the Department of Agriculture

in the manner provided by the act of Congress of May 29, 1884, establishing the Bureau of Animal Industry.

The existence of this contagious disease in such important cattle centers as these States is a danger so menacing to the cattle interests of the United States, that it calls for the most prompt, thorough, and energetic measures that can be taken, not only by the National Government, but also by all parties interested in the preservation of the great cattle industry of the country.

No persons or class of persons are more interested in the safety and growth of this industry than transportation companies, who derive a very large proportion of their earnings from the shipment of cattle and their products, and none should be more active and energetic in enforcing such measures as are necessary to stamp out this disease and prevent its possible spread.

The insidious character of this disease, its easy and imperceptible propagation by contact with animals having the germs of disease and giving no outward symptoms of its presence, the contraction of the plague from infected cars, the spreading of the germs by means of manure carried in uncleansed cars from place to place, all make it a matter of grave concern, and render it necessary that stringent measures should be adopted to protect the cattle interests of the country from this great evil.

I have, therefore, to suggest and to request that all transportation companies shall establish on their respective lines a rule, and see that it is rigidly enforced, that all cars that have carried live stock shall be thoroughly cleansed on the discharging of their freight, and not allowed to leave the freight or stock yards before this is done. Also that the said cars shall be carefully disinfected in the following manner:

(1) Remove all litter and manure.

(2) Wash the car with water thoroughly and until clean.

(3) Saturate the walls and floors with a solution made by dissolving 4 ounces of chloride of lime to each gallon of water. Stock yards and pens should be cleansed and disinfected at least once a week.

Transportation companies having connections with infected districts should require parties offering cattle for shipment to present, at point of loading, affidavits of the owner and two disinterested persons, stating that the cattle to be shipped have been known to affiliates for at least six months next preceding, and that the said cattle have not been in any of said districts and have not come in contact with any cattle from said districts. Said affidavits should be attached to and accompany the way-bill to point of destination.

As several very extensive outbreaks of pleuro-pneumonia have recently been traced to cattle that had been shipped from infected districts a considerable distance by rail, the necessity of these precautions can not be overestimated, and if enforced, they would be a material safeguard against the spread of this disease.

Railroad companies can be of the greatest assistance to the Bureau of Animal Industry in its work of extirpating pleuro-pneumonia, if they will co-operate with it and assist in maintaining the rules and regulations prescribed by me on April 15, 1887, and the quarantine orders since made.

I hope this support and assistance will be cordially given.

Very respectfully,

NORMAN J. COLMAN,
Commissioner of Agriculture.

INVESTIGATION OF REPORTED DISEASES.

A great number of investigations have been made during the year to determine the nature of diseases supposed to be contagious. Special attention has been given to outbreaks of disease among cattle in which the symptoms at all resembled those of pleuro-pneumonia. While requests for such investigation have been more numerous from the States where lung-plague is known to exist, they have by no means been confined to such sections, but have come from all parts of the country. It is hoped by such inquiries that the Department may receive early information of any fresh outbreaks of pleuro-pneumonia which occur, and in case of other maladies may be able to give directions of value for the treatment and prevention. It has been discovered by these investigations that there are a number of diseases affecting the live stock of the country which have been hitherto undescribed, or about which but little is known. Such diseases are taken up and studied from a scientific standpoint whenever an opportunity is offered.

CO-OPERATION TO PREVENT LOSSES FROM SOUTHERN FEVER.

The losses from Southern fever, or so-called Texas fever, became so heavy in the Western States and Territories that most stringent local quarantines were adopted, which, since 1885, have threatened to entirely destroy the trade in cattle that had previously found an outlet in this direction. The prosperity of the Southwest, and particularly of Texas, is so dependent, under existing conditions, upon an outlet for cattle as unrestricted as is consistent with the safety of stock in other States, that particular attention has been given to this subject.

An investigation was first made as to the parts of Texas from which animals were capable of carrying the virus of this disease, and it was demonstrated that there is a large section in that State from which cattle may be taken without danger, as they are incapable of disseminating this malady. There should consequently be no restrictions placed upon cattle from that district.

Two agents of the Bureau of Animal Industry have been employed to co-operate both with the shippers and drivers of cattle in Texas and with the authorities of those States and Territories to which these animals were taken as store cattle, in order to facilitate this traffic and prevent losses from it. No quarantine regulations have been made by the Department in connection with this disease, but the aim has been to furnish full information to both parties and to endeavor to maintain harmonious relations between them. The agents of the Bureau were able to show that certain herds of cattle came from parts of Texas where no infection existed, and these were consequently admitted to their destination without quarantine. Other herds from the infected district were shown to have been outside of that district for more than ninety days, and as this is the limit of time the infection can be carried, these also could be sold without restriction.

On the other hand, full information was furnished to shippers in Texas of the quarantine restrictions in other parts of the country, and they were advised as to what cattle could be safely shipped and which ones should be held. In this way both the losses from disease and from unexpected quarantine were reduced to a minimum.

This enormous interstate commerce in cattle from Texas is still in a precarious condition, and should have the careful supervision of the National Government to protect it from unjust local restrictions, and to so regulate it that other States will be protected as far as possible from loss by disease.

The losses which have occurred from Southern fever during the past year have been mostly caused by Southern cattle shipped for immediate slaughter—a class of cattle which are allowed by the animal-industry law to be shipped for this purpose without other restrictions than that they shall only be unloaded in transit for food and water. Such animals are transported in the same cars and placed in the same pens in stock-yards that are used for Northern cattle, and the result is that many of the latter are infected and die. This loss occurs among cattle which are sold at the stock-yards for feeding purposes, and has become so serious that farmers can no longer purchase with safety such feeders at the large stock-yards during the summer and early fall months.

The transportation and stock-yards companies should set apart certain cars and certain lanes and pens to be used exclusively by cattle from the infected districts of the country, and in this way the losses from this disease which are now very heavy might be almost entirely prevented.

SCIENTIFIC INVESTIGATION OF DISEASES.

For a number of years a scientific investigation has been conducted by this Bureau of the Department into the nature of the more important contagious diseases of animals. Since this investigation was begun the ideas of the medical profession in regard to such diseases have been revolutionized and a new science has been built up. The work done here has been equal in scientific accuracy to that done in any part of the world, and has added much to this department of knowledge.

More attention has been devoted to the study of hog cholera than other diseases because of the heavy annual losses which it causes. These investigations show that there are two distinct diseases which are popularly spoken of as hog cholera. The germs of these diseases have been isolated and studied, and we know the conditions under which they can exist and multiply outside of the animal, and how they can be destroyed in such situations. This is a long step in advance and it makes our knowledge of these maladies equal to that which has been acquired with the best studied diseases of people. True, we have discovered no medicine that will act as a specific and cure the plague, but the same may be said in reference to the contagious diseases of mankind. The value of such work must be found principally in the methods of prevention which it suggests and makes possible, and which are really of much more value than any method of treatment could be.

With hog cholera we find that lime is a most efficient disinfectant, and that by its use in very limited quantities the contagion may be destroyed in water, in organic accumulations, and in the soil. Other methods of prevention, including inoculation and various proposed forms of treatment, have been tested without satisfactory results. There are several promising lines of investigation still unstudied, which will be taken up as rapidly as possible.

The scientific investigations of the contagious diseases of animals should be extended and made to cover a wider field than is now possible, both for the importance of preventing these diseases and the light which such investigations throw upon the plagues which affect mankind. There are many diseases which should receive a most careful study. Among these the most common are anthrax, glanders, and tuberculosis, the germs of which also affect people, and which, on that account, we have hesitated to study, very extensively in the Department building where so many persons are employed, and where there are no facilities for safely disposing of the contagious material. The present laboratory is in the garret and can not be made suitable for this kind of work. For this reason the investigations have progressed slowly, and many which should have been prosecuted have not been undertaken. There is no more promising field of scientific investigation than this, and none in which there is an opportunity to achieve results of more value to our people.

INVESTIGATION AS TO THE CONDITION OF THE ANIMAL INDUSTRY.

Under this part of its duty the Bureau has each year taken up one or more lines of investigation that have not been elucidated by the general census returns, or by the reports of the statistician of the Department. During the past year a very thorough inquiry has been made as to the number and value of the thorough-bred cattle of different varieties in the United States. A separate study is now being made of the sheep industry, its condition, the methods by which it is

conducted in the various sections of the country, and the means by which it can be improved and made more profitable.

The investigations of this character have been made in a comparatively inexpensive manner by the appointment of one or two agents having special knowledge of the subject. The results obtained in the past have been accurate and of very great value.

CLERICAL WORK OF THE BUREAU.

Since the passage of the appropriation act for the current year the clerical work of the Bureau has greatly increased. There has been a large correspondence from all sections of the country in reference to outbreaks of disease, and requesting copies of reports or information on special subjects connected with stock-raising.

It has also required much labor to make a record of the reports of all the different employés and to supervise their work and expenditures. This work has been organized as rapidly as possible and systematized so that it is done with a minimum number of employés.

The details of the work of this Bureau are published in annual reports, which show the work done and the information obtained during the year. There is, however, an increasing demand for special reports on various subjects, which shall collect and summarize all attainable knowledge bearing on the particular subject treated. It seems to me very desirable that such special reports on matters of interest and importance should be issued from time to time, and more attention will in the future be devoted to this branch of the work.

Accompanying this will be found a detailed statement of expenditures, with list of persons employed, and other items, as called for in the act establishing the Bureau of Animal Industry.

Very respectfully,

NORMAN J. COLMAN,
Commissioner of Agriculture.

Itemized statements of the Bureau of Animal Industry, showing all expenditures from July 1, 1886, to November 30, 1887, and a list of all persons employed during the same period.

EMPLOYÉES FROM JULY 1, 1886, TO NOVEMBER 30, 1887.

[* And traveling expenses. † Promoted.]

Name.	Capacity.	Date of appointment.	Services ended.	Compensation.		
				Per diem.	Per month.	Per annum.
D. E. Salmon	Chief of Bureau	May 31, 1884	.....	.....	.....	\$3,000
Miles Fuller	Clerk of Bureau	July 1, 1884	.....	.....	.....	1,500
W. J. Cowing	Assistant in Bureau	July 1, 1886	.....	.....	.....	1,800
Theobald Smith	Assistant in laboratory	July 1, 1886†	.....	.....	.....	1,800
F. L. Kilborne	Superintendent experiment station.	Aug. 15, 1885	.....	.....	.....	1,600
Cooper Curtice	Assistant in laboratory	July 31, 1886	.....	.....	.....	1,400
Do.	do	Mar. 1, 1887†	.....	.....	.....	1,600
V. A. Moore	do	Dec. 22, 1886	.....	.....	.....	900
Edward B. Jones	Assistant in Bureau	Apr. 2, 1887	.....	.....	.....	1,200
Mary Sullivan	do	July 1, 1886	.....	.....	.....	900
Do.	do	Jan. 1, 1887†	.....	.....	.....	1,000
Mary T. Dent	do	Apr. 2, 1887	.....	.....	.....	660
Annie W. Lockhart	do	May 1, 1886	Oct. 22, 1886	.....	.....	660
William Alexander	Messenger	July 1, 1884	.....	.....	.....	720
R. P. Logan	do	Apr. 8, 1887	.....	.....	.....	720
W. E. Mundell	Laborer	Sept. 14, 1886	Nov. 9, 1886	.....	.....	600
Do.	do	June 15, 1887	.....	.....	.....	600
B. F. Yaste	do	July 16, 1884	Apr. 30, 1887	.....	.....	600

Itemized statement showing expenditures and number of employes, etc.—Continued.

EMPLOYÉES FROM JULY 1, 1886, TO NOVEMBER 30, 1887—Continued.

Name.	Capacity.	Date of appointment.	Services ended.	Compensation.		
				Per diem.	Per month.	Per annum.
C. W. Winslow	Laborer	Apr. 1, 1887	June 15, 1887			\$600
F. A. Bickford	do	Apr. 25, 1887	June 30, 1887	\$1.50		
Andrew Clay	do	July 27, 1886	Aug. 2, 1886	1.50		
J. S. Dewey	do	Aug. 17, 1887	Sept. 5, 1887	1.50		
William Halley	Carpenter	July 5, 1886	July 29, 1886	3.00		
Samuel Gregg	do	Dec. 22, 1885	Mar. 19, 1887	3.00		
Richard H. Bailey	do	Jan. 19, 1887	Mar. 12, 1887	3.00		
Robert S. Forbes	Assistant in Bureau	Feb. 21, 1887		3.75		
Do.	do	Nov. 16, 1887†				1,400
A. M. Farrington	do	Oct. 8, 1887				2,250
George Marx	Draughtsman	Oct. 1, 1886	June 30, 1887			2,000
T. T. D. Andrews	Employé	Apr. 16, 1887				*1,800
James Anderson	Inspector	Apr. 25, 1887				*1,600
E. R. Allen	Temporary employé	Oct. 13, 1887	Oct. 22, 1887	*8.00		
R. M. Bell	Employé	Dec. 22, 1886				*1,400
H. J. Beer	do	Sept. 22, 1886	May 31, 1887			2,000
John P. Bond	Inspector	Apr. 25, 1887		*8.00		
Lucian T. Bell	do	July 18, 1887		*8.00		
James A. Breakell	do	July 20, 1887				*1,600
William S. Brooke	Employé	Oct. 14, 1887				*1,000
S. P. Cunningham	do	July 1, 1885	Apr. 10, 1887		*\$150	
A. W. Clement	Inspector	Apr. 9, 1887				*1,800
Do.	do	Dec. 1, 1887†				*2,000
John Casewell	Chief inspector, Illinois	Oct. 15, 1887		*8.00		
C. K. Dyer	Inspector	Aug. 14, 1886				*1,600
William Dimond	do	Nov. 3, 1886				*1,600
Do.	Chief inspector, New Jersey.	May 24, 1887†				*1,800
Do.	do	Dec. 1, 1887†				*2,000
William S. Devoe	Inspector	Apr. 27, 1887				*1,600
Do.	do	Sept. 1, 1887†				*1,800
Do.	do	Dec. 1, 1887†				*2,000
George C. Faville	Chief inspector, Maryland.	Apr. 21, 1887		*8.00		
Thomas J. Herr	do	Sept. 29, 1886		*8.00		
J. W. Hawk	do	Apr. 15, 1886	July 21, 1886	*8.00		
Do.	do	Sept. 29, 1886	Oct. 14, 1886	*8.00		
W. H. Harbaugh	do	Oct. 27, 1886	Dec. 15, 1886	*8.00		
Henry W. Hanna	Employé	Feb. 25, 1887				900
Do.	do	June 1, 1887†				1,000
Albert Hassall	Inspector	May 24, 1887				*1,600
W. J. Hobday	Employé	Aug. 15, 1887				*1,000
J. C. Jackson	Inspector	Mar. 7, 1887				*1,600
Daniel Keller	Employé	July 30, 1886				*900
Do.	do	June 1, 1887†				*1,000
James Law	Chief inspector	Apr. 7, 1887		*20.00		
Wm. B. E. Miller	Inspector	Apr. 15, 1886	July 31, 1886	*8.00		
Do.	do	Oct. 7, 1886		*8.00		
Ch. B. Michener	do	July 20, 1886	Sept. 18, 1886			*1,800
Do.	do	June 24, 1887		*8.00		
A. J. Murray	do	Sept. 29, 1886	Oct. 11, 1886	*10.00		
W. H. Martenet	do	Oct. 23, 1886				*1,600
A. S. Mercer	Employé	Sept. 15, 1886	Dec. 15, 1886	*8.00		
Do.	do	July 12, 1887				*1,600
A. D. Melvin	Inspector	Dec. 10, 1886				*1,600
Do.	do	Sept. 1, 1887†				*1,800
Do.	do	Dec. 1, 1887†				*2,000
H. H. Metcalf	Employé	July 12, 1887				*1,600
R. A. McLean	Inspector	Mar. 1, 1887		*8.00		
James A. McDewitt	Special inspector	Sept. 19, 1887		*8.00		
E. W. Perry	Employé	Mar. 1, 1885		*8.00		
F. W. Patterson	Inspector	Sept. 14, 1886				*1,400
N. H. Paaren	do	Nov. 24, 1886		*8.00		
B. D. Phillips	Employé	Oct. 12, 1887				840
William H. Rose	Inspector	Aug. 15, 1885		*8.00		
H. W. Rowland	do	July 1, 1884	Mar. 7, 1887	*8.00		
Do.	do	Mar. 7, 1887				*1,400
George W. Rust	Employé	Dec. 10, 1886				*1,800
J. Elmer Ryder	Inspector	Aug. 15, 1887				*1,600
A. K. Robertson	do	Oct. 22, 1887				*1,600
S. H. Standart	Employé	Oct. 1, 1884	July 31, 1886	*10.00		
T. W. Spranklin	Inspector	June 25, 1886	Aug. 27, 1886	*8.00		
Do.	do	Aug. 27, 1886	Oct. 31, 1887			*1,000
Sidney Shepherd	Employé	Nov. 3, 1886				1,200
Do.	do	May 16, 1887†				1,500
E. C. H. Schroeder	Inspector	Aug. 15, 1887				*1,000

Itemized statement showing expenditures and number of employes, etc.—Continued.

EMPLOYÉES FROM JULY 1, 1886, TO NOVEMBER 30, 1887—Continued.

Name.	Capacity.	Date of appointment.	Services ended.	Compensation.		
				Per diem.	Per month.	Per annum.
Alex. Souter	Employé	Dec. 8, 1886	Dec. 18, 1886	\$5.00	.....	.....
H. M. Taylor	Agent	Apr. 15, 1885	.....	*10.00	.....	.....
M. R. Trumbower	Inspector	Mar. 29, 1886	.....	*8.00	.....	.....
Bower Talbot	do	Apr. 30, 1887	.....	*8.00	.....	.....
William H. Wray	Chief inspector, Maryland.	Aug. 27, 1886	.....	*8.00	.....	.....
Do	Chief inspector, Maryland and New York.	Apr. 1, 1887	.....	10.00	.....	.....
F. M. Webster	Employé	Mar. 7, 1887	July 15, 1887	.....	*\$80	.....
J. A. Walrath	Inspector	Apr. 2, 1887	.....	.....	.....	*\$1,600
Do	do	Dec. 1, 1887	.....	.....	.....	*1,800
A. C. Young	do	Aug. 18, 1887	.....	.....	.....	*1,600
Wm. E. Zimmerman	Employé	Oct. 25, 1887	.....	.....	.....	*1,000
George J. Murphy	Temporary employé	Nov. 28, 1887	.....	.....	.....	*1,000

DISINFECTORS, GUARDERS, ETC.

<i>Illinois.</i>						
Fred. W. Snell	Guarder	Sept. 21, 1886	Dec. 10, 1886	.....	.....	1,000
William Taylor	do	do	do .....	.....	.....	1,000
Jacob Miller	do	do	Dec. 15, 1886	.....	.....	1,000
Alex. Taylor	do	do	Sept. 30, 1887	.....	.....	1,000
S. W. Nedbury	do	do	Nov. 30, 1886	.....	.....	1,000
Thomas Graham	do	do	Dec. 13, 1886	.....	.....	1,000
G. W. Anderson	do	do	do .....	.....	.....	1,000
William C. Brink	do	do	Dec. 9, 1886	.....	.....	1,000
J. C. Wallace	do	do	do .....	.....	.....	1,000
James Feltham	do	do	Dec. 13, 1886	.....	.....	1,000
Redmond LaFgan	do	do	Dec. 10, 1886	.....	.....	1,000
Calvin H. Dodge	do	do	Jan. 31, 1887	.....	.....	1,000
David Dustin	do	Sept. 22, 1886	Dec. 10, 1886	.....	.....	1,000
A. W. Bredt	do	do	Nov. 30, 1887	.....	.....	1,000
James P. Cavanagh	do	Sept. 25, 1886	May 23, 1887	.....	.....	1,000
J. D. Casey	do	do	Dec. 10, 1886	.....	.....	1,000
O. G. Thompson	do	do	do .....	.....	.....	1,000
C. C. Gibson	do	do	do .....	.....	.....	1,000
Rufus Chapin	do	do	Sept. 30, 1887	.....	.....	1,000
Joseph Byrnes	do	do	Dec. 31, 1886	.....	.....	1,000
Theo. Schloeder	do	do	Dec. 13, 1886	.....	.....	1,000
C. L. Marshall	do	do	Sept. 3, 1887	.....	.....	1,000
William Linn	do	do	May 30, 1887	.....	.....	1,000
J. S. Mullen	do	do	Dec. 9, 1886	.....	.....	1,000
Edmund D. Lee	do	do	Dec. 15, 1886	.....	.....	1,000
J. Householder	do	do	Dec. 31, 1886	.....	.....	1,000
M. B. Lawrence	do	do	Aug. 31, 1887	.....	.....	1,000
John Heaphey	do	do	Dec. 31, 1886	.....	.....	1,000
P. A. Barthelson	do	do	Dec. 11, 1886	.....	.....	1,000
H. T. Lewis	do	do	Jan. 31, 1887	.....	.....	1,000
B. F. Berry	do	Sept. 27, 1886	Dec. 24, 1886	.....	.....	1,000
Olof Olson	do	Mar. 16, 1887	Sept. 30, 1887	.....	.....	1,000
William A. Edwards	do	May 19, 1887	Oct. 31, 1887	.....	.....	1,000
Walter F. Landreth	do	May 1, 1887	do .....	.....	.....	1,000
Michael Miller	do	Oct. 5, 1886	Mar. 29, 1887	.....	.....	1,000
Herbert A. Brown	do	Dec. 1, 1886	.....	.....	.....	1,000
W. B. Brainard	do	Dec. 31, 1886	May 11, 1887	.....	.....	1,000
Nels Johnson	do	do	Oct. 31, 1887	.....	.....	1,000
E. B. Phillips	do	do	May 31, 1887	.....	.....	1,000
George Carter	do	do	do .....	.....	.....	1,000
John Symons	do	do	Oct. 31, 1887	.....	.....	1,000
C. E. McClanathan	do	Feb. 22, 1887	do .....	.....	.....	1,000
Henry Vanderpoel	do	May 23, 1887	.....	.....	.....	1,000
Nathan Perkins	do	Apr. 27, 1887	Aug. 1, 1887	2.00	.....	.....
B. F. Davis	do	May 18, 1887	Nov. 30, 1887	.....	.....	1,000
David Naismith	do	May 5, 1887	Oct. 21, 1887	2.50	.....	.....
A. M. Fairchild	do	June 1, 1887	Aug. 1, 1887	2.50	.....	.....
C. R. L. Willson	do	do	Sept. 30, 1887	2.50	.....	.....
F. G. Edwards	do	do	Nov. 30, 1887	.....	.....	1,000
Leonard Pearson	do	July 1, 1887	Sept. 19, 1887	2.50	.....	.....
J. B. Trull	do	Aug. 1, 1887	Oct. 25, 1887	2.00	.....	.....
Thomas Coyle	do	May 10, 1887	Nov. 30, 1887	.....	.....	1,000
William J. Watt	Chief disinfectors	Apr. 21, 1887	.....	4.00	.....	.....
William Rice and team	Disinfectors	Apr. 18, 1887	.....	5.00	.....	.....

Itemized statement showing expenditures and number of employes, etc.—Continued.

DISINFECTORS, GUARDERS, ETC.—Continued.

Name.	Capacity.	Date of appointment.	Services ended.	Compensation.		
				Per diem.	Per month.	Per annum.
Illinois—Continued.						
Edward Rice	Disinfector	Apr. 18, 1887 .....	.....	\$2. 50 .....	.....	.....
John Roche	do	do .....	.....	2. 50 .....	.....	.....
Martin Roche	do	Apr. 20, 1887 .....	.....	2. 50 .....	.....	.....
William Mackey	do	Apr. 18, 1887 .....	.....	2. 50 .....	.....	.....
John Tierney	do	Apr. 20, 1887	Oct. 31, 1887	2. 50 .....	.....	.....
John Thompson	do	do	Aug. 6, 1887	2. 50 .....	.....	.....
Jos. Durocher	do	Apr. 25, 1887	Sept. 9, 1887	2. 50 .....	.....	.....
Pat Fitzgerald	do	Apr. 26, 1887	Nov. 11, 1887	2. 50 .....	.....	.....
Val. Mollinger	do	Apr. 29, 1887	Nov. 7, 1887	2. 50 .....	.....	.....
Chas. Martin	do	Apr. 20, 1887	Aug. 17, 1887	2. 50 .....	.....	.....
David Holland	do	May 2, 1887	Nov. 3, 1887	2. 50 .....	.....	.....
Michael Bacon	do	do	July 5, 1887	2. 50 .....	.....	.....
John Graham	do	July 11, 1887 .....	.....	2. 50 .....	.....	.....
James McLean	do	do .....	.....	2. 50 .....	.....	.....
Thos. Moore	do	do	Nov. 7, 1887	2. 50 .....	.....	.....
John J. Loftis	do	do	do	2. 50 .....	.....	.....
Henry Brothers	do	do	Aug. 13, 1887	2. 50 .....	.....	.....
William B. Shannon	do	July 18, 1887 .....	.....	2. 50 .....	.....	.....
Christ Thabbe	do	July 11, 1887	Aug. 13, 1887	2. 50 .....	.....	.....
John Howard	do	July 16, 1887	do	2. 50 .....	.....	.....
Michael Rice	do	Oct. 1, 1887 .....	.....	2. 50 .....	.....	.....
William Hermann	do	Oct. 25, 1887 .....	.....	2. 50 .....	.....	.....
Michael Kirby	do	Oct. 26, 1887	Nov. 7, 1887	2. 50 .....	.....	.....
Maryland.						
J. B. Hampshire	Guarder	Oct. 25, 1887 .....	.....	.....	.....	\$1, 000
David Riley	do	Oct. 26, 1887 .....	.....	.....	.....	1, 000
Carroll Ensor	do	do .....	.....	.....	.....	1, 000
Carvil Perdue	do	do .....	.....	.....	.....	1, 000
C. C. Prather	do	do .....	.....	.....	.....	1, 000
Louis A. McDaniel	do	Nov. 11, 1887 .....	.....	.....	.....	1, 000
L. G. Hubble	do	do .....	.....	.....	.....	1, 000
George G. Latchford	do	do .....	.....	.....	.....	1, 000
John Davis	do	do .....	.....	.....	.....	1, 000
Thomas A. Poulton	do	do .....	.....	.....	.....	1, 000
S. A. Mitchell	do	do .....	.....	.....	.....	1, 000
Otho Gaver	do	do .....	.....	.....	.....	1, 000
Henry C. Rohr	do	Nov. 1, 1887 .....	.....	.....	.....	1, 000
Thomas B. Gatch	do	Nov. 25, 1887 .....	.....	.....	.....	1, 000
William O'Neal	do	do .....	.....	.....	.....	1, 000
William Hardy	do	do .....	.....	.....	.....	1, 000
Frederick Faville	Clerical work	Oct. 25, 1887 .....	.....	.....	.....	840
J. B. Trull	do	do .....	.....	.....	.....	1, 000
David Holland	Chief disinfectors	Nov. 3, 1887 .....	.....	.....	.....	1, 000
John Craig and team	Disinfector	Nov. 16, 1887 .....	.....	3. 00 .....	.....	.....
Jas. H. Gaith and team	do	do .....	.....	3. 00 .....	.....	.....
John Flannigan	do	do .....	.....	1. 50 .....	.....	.....
Charles Feinour	do	do .....	.....	1. 50 .....	.....	.....
Adam Maloney	do	do .....	.....	1. 50 .....	.....	.....
M. J. Kelly	do	do .....	.....	1. 50 .....	.....	.....
John Doyle	do	do .....	.....	1. 50 .....	.....	.....
John Tierney	do	do .....	.....	1. 50 .....	.....	.....

NOTE.—Most of the disinfectors were employed but a few days each month.

Itemized statement showing expenditures and number of employes, etc.—Continued.

EXPENDITURES JULY 1, 1886, TO NOVEMBER 30, 1887.

	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.	Total.	Number of affected cattle.	Number of exposed cattle.
New York	\$1,250.85	\$1,761.11	\$54.23	\$5,151.43	\$14,418.41	\$25,622.03	210	681
New Jersey	4,112.87	1,554.36	156.05	1,920.00	2,496.00	10,239.28	78	92
Maryland	16,721.64	8,550.49	928.46	31,187.91	37,522.99	94,911.49	1,329	1,391
Illinois	46,229.91	3,529.44	3,789.33	3,179.53	13,970.74	70,698.95	172	859
Vermont, Massachusetts, Pennsylvania, Virginia, and District of Columbia	2,617.92	964.35	.....	.....	113.50	3,695.77	.....	4
Texas	2,172.22	874.78	.....	.....	.....	3,047.00	.....	.....
For scientific investigations	11,320.01	1,242.49	4,943.99	.....	.....	17,506.49	.....	.....
For the collection of information	10,752.97	1,312.97	4.75	.....	.....	12,070.69	.....	.....
For investigation of reported diseases	1,135.85	663.41	22.38	.....	.....	1,821.64	.....	.....
Other salaries and expenses	16,012.31	393.28	2,927.52	.....	.....	19,333.11	.....	.....
Total	115,326.55	20,834.68	12,826.71	41,438.87	68,521.64	258,967.45	1,789	3,027

Total amount expended of the appropriation for 1886-'87.

	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Total.	No. affected cattle.
New York	\$33.59	\$20.00	.....	\$189.16	\$242.75	12
New Jersey	1,716.88	422.80	.....	.....	2,139.68	.....
Maryland	8,081.02	4,708.39	\$334.76	23,952.00	37,076.17	1,043
Illinois	21,859.45	2,300.31	1,040.28	1,557.88	26,757.92	102
Massachusetts and Virginia	464.00	282.39	.....	.....	746.39	.....
Texas	1,400.00	569.08	.....	.....	1,969.08	.....
For scientific investigations	7,414.04	822.38	3,709.02	.....	11,945.44	.....
For the collection of information	6,907.07	346.15	4.75	.....	7,257.97	.....
For investigation of reported diseases	843.85	509.42	20.18	.....	1,364.45	.....
Other salaries and expenses	8,723.99	288.58	1,431.64	.....	10,444.21	.....
Total	57,443.89	10,260.50	6,540.63	25,699.04	99,944.06	1,157

Expended from the appropriation for 1886-'87, by States.
MARYLAND.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.
1886.							
July 28	Charles Kuhn <i>et al.</i>	Baltimore County.	6 animals.				\$131.00
Aug. 4	John Miller <i>et al.</i>	do	10 animals.				164.00
5	T. W. Spranklin.	Investigating pleuro-pneumonia	Salary and expenses, July	\$120.00	\$42.00		
11	James S. Nickel, <i>et al.</i>	Baltimore County.	12 animals.				208.00
20	Louis Clay	do	4 animals.				60.00
27	H. W. Crook	Howard County.	1 animal.				12.00
27	Catherine Lauff <i>et al.</i>	Baltimore County.	9 animals.				161.00
30	John W. Evans <i>et al.</i>	do	16 animals.				259.00
Sept. 4	John H. Grass, <i>et al.</i>	do	4 animals.				86.00
8	Nimrod B. Dorsey	Howard County.	6 animals.				99.00
8	Anna Dickmann	Baltimore County.	5 animals.				80.00
17	John Heinz	do	1 animal.				18.00
17	Daniel Keller	Investigating pleuro-pneumonia	Salary and expenses, August	75.80	43.60		
17	John W. Evans	Baltimore County.	10 animals.				200.00
17	Nimrod B. Dorsey.	Howard County.	29 animals.				1,094.00
17	J. T. Stephens <i>et al.</i>	Carroll County.	6 animals.				96.00
20	Ch. B. Michener	Investigating pleuro-pneumonia	Salary and expenses, July 22 to August 22.	156.52	184.10		
21	T. W. Spranklin.	do	Salary and expenses, August	120.00	31.00		
21	T. Alex. Seth.	Baltimore County.	2 animals, registered				300.00
22	C. K. Dyer	Investigating pleuro-pneumonia.	Salary and expenses, August (part)	56.52	55.24		
				528.84	353.94		2,468.00
Oct. 6	Daniel Keller	Pleuro-pneumonia work	Salary and expenses, September	73.40	26.84		
16	W. H. Rose	do	Salary and expenses, September (part)	104.00	25.95		
19	M. E. Trumbower	do	Salary and expenses, September	192.00	99.83		
20	T. W. Spranklin	Pleuro-pneumonia	do	81.60	30.50		
20	W. H. Wray	do	do	176.00	74.75		
20	C. K. Dyer	do	do	130.40	122.60		
21	C. B. Michener	do	Salary and expenses, August 23 to September 22.	151.63	190.99		
21	Nimrod B. Dorsey.	Howard County.	9 animals.				300.00
21	John Kunkel <i>et al.</i>	Baltimore County	63 animals.				1,231.00
21	Chris. Selmanble	Carroll County	2 animals.				40.00
26	Jacob Kuhle	Baltimore County	1 animal.				15.00
4	James Bailey & Son	do	Carbonate of lime			\$34.98	
4	C. Spitznagel <i>et al.</i>	do	12 animals				232.00
6	Daniel Keller	Pleuro-pneumonia	Salary and expenses, October	75.80	23.00		
9	John Mateling, <i>et al.</i>	Baltimore County.	12 animals				213.00
9	C. K. Dyer.	Pleuro pneumonia	Salary and expenses, October.	134.80	125.81		

9	W. H. Wray	do	do	208.00	141.81	208.00	141.81
16	T. W. Spranklin	do	do	84.20	30.50	84.20	30.50
18	John Loebner	Baltimore County	18 animals				650.00
18	F. W. Patterson	Pleuro-pneumonia	31 animals	117.90	50.33		675.00
18	F. M. Richardson <i>et al.</i>	Baltimore County	Salary and expenses, October				625.01
7	William Dimond	Pleuro-pneumonia	Salary and expenses, November	65.20	45.08		80.00
7	John L. Yates, Jr., <i>et al.</i>	Baltimore County	33 animals				
7	William Williams	Carroll County	4 animals				
8	W. H. Wray	Pleuro-pneumonia	Salary and expenses, November	200.00	135.00		
9	C. K. Dyer	do	do	130.40	113.69		
10	F. W. Patterson	do	do	114.20	63.37		
17	J. Clarence Doyle	Baltimore	20 dozen locks			60.00	
17	William H. Martenet	Pleuro pneumonia	Salary and expenses, November	134.75	24.45		
17	T. W. Spranklin	do	do	27.50	81.60		
17	Daniel Keller	do	do	73.40	16.10		
17	M. R. Trumbower	do	Expenses September		12.00		218.00
20	Henry Schaefer <i>et al.</i>	Baltimore County	11 animals				75.00
24	D. M. Nesbit	Prince George's County	3 animals				
24	Samuel G. B. Cook & Co.	Baltimore	Sundries			72.40	
24	M. Kempiski <i>et al.</i>	Baltimore County	16 animals				284.00
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1887.	D. M. Nesbit <i>et al.</i>	Baltimore County	5 animals	2,329.28	1,380.16	167.38	4,618.00
Jan.	do	Prince George's County	2 animals				106.00
8	J. S. Nickel <i>et al.</i>	Baltimore County	11 animals				55.00
10	Seth A. Holton	do	do				235.00
11	W. H. Wray	Prince George's County	2 animals				40.00
11	T. W. Spranklin	Pleuro-pneumonia	Salary and expenses, December	208.00	119.30	.98	
11	W. H. Martenet	do	do	84.20	33.50		
11	William Dimond	do	do	134.80	26.18		
11	C. K. Dyer	do	do	134.80	78.93		
11	Daniel Keller	do	do	134.80	99.40		
11	F. W. Patterson	do	do	75.80	43.05		
12	A. Rosenthal & Son <i>et al.</i>	do	do	117.90	68.20		
17	Ephraim Mallonee	Baltimore County	19 animals				370.00
22	D. M. Nesbit	do	33 animals				662.00
25	Joseph Winkler <i>et al.</i>	Prince George's County	18 animals				420.00
26	Lorenz Weinbeck	Baltimore County	9 animals				165.00
27	George L. Rye	do	8 animals				156.00
29	Franz C. Kuhn <i>et al.</i>	do	1 animal				25.00
2	D. M. Nesbit	do	35 animals				695.00
2	Daniel Keller	Prince George's County	2 animals				40.00
4	William H. Martenet	Pleuro-pneumonia	Salary and expenses, January	77.50	58.83		
5	F. W. Patterson	do	do	137.80	27.40		
5	C. K. Dyer	do	do	120.60	70.08		
5	W. H. Wray	do	do	137.80	106.15		
9	Geahart Zink <i>et al.</i>	do	do	192.00	128.66		
9	Joseph Boardmore	Baltimore County	22 animals				475.00
10	William Dimond	Anne Arundel County	1 animal				25.00
10	T. W. Spranklin	Pleuro pneumonia	Salary and expenses, January	137.80	100.41		
14	Herman Gerken <i>et al.</i>	do	do	86.10	36.50		
		Baltimore County	10 animals				192.00

Expended from the appropriation for 1886-'87, by States—Continued.
MARYLAND—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.
1887.							
Feb. 14	Samuel K. Frazier <i>et al.</i>	Anne Arundel County	2 animals				\$33.00
24	Oliver H. Disney <i>et al.</i>	Baltimore County	11 animals				220.00
24	Harry Seeborn <i>et al.</i>	Anne Arundel County	6 animals				130.00
Mar. 2	Henry Kollenbenz	Baltimore County	3 animals				50.00
5	Daniel Keller	Pleuro-pneumonia	Salary and expenses, February	\$70.00	\$66.84		
5	W. H. Martenet	do	do	124.40	40.36		
7	C. K. Dyer	do	do	124.01	62.01		
7	William Dimond	do	do	124.40	98.49		
7	W. H. Wray	do	do	184.00	102.00	\$3.50	
7	F. W. Patterson	do	do	108.80	85.70		
8	C. F. Miller <i>et al.</i>	Baltimore County	22 animals				430.00
8	Alfred L. Britton	Anne Arundel County	1 animal				20.00
Mar. 9	Mrs. Michael Giles <i>et al.</i>	Baltimore County	18 animals				370.00
15	Carlin & Fulton	Baltimore	Locks, etc			145.40	
21	T. W. Spranklin	Pleuro-pneumonia	Salaries and expenses for February	77.80	33.50		
				2,593.70	1,485.49	119.88	4,916.00
Apr. 4	Lewis Clay <i>et al.</i>	Baltimore County	52 animals				1,149.00
5	John E. Deeds	Carroll County	1 animal				17.00
7	Henry W. Hanna	Pleuro-pneumonia	Salary for March	77.50	164.04		
7	C. K. Dyer	do	Salary and expenses for March	137.80	129.64		
7	William Dimond	do	do	137.80	129.64		
7	W. H. Wray	do	do	216.00	147.14	10.50	
7	T. W. Spranklin	do	do	86.10	36.50		
7	Daniel Keller	do	do	77.50	90.04		
7	W. H. Martenet	do	do	137.80	48.25		
7	F. W. Patterson	do	do	120.60	71.75		
8	J. C. Jackson	do	do	80.00	48.62		
13	D. M. Nesbit	Prince George's County	Salary and expenses for March (part)				
13	Christ. Ebert <i>et al.</i>	Baltimore County	12 animals				305.00
13	A. P. Forsyth <i>et al.</i>	Howard County	43 animals				889.00
14	D. N. Stephens <i>et al.</i>	Baltimore County	15 animals				330.00
22	Mrs. Rebecca Kidd <i>et al.</i>	do	do				290.00
25	T. Alex. Seth	do	52 animals				1,039.00
May 3	Rheinhard Heinemann <i>et al.</i>	do	10 animals				1,600.00
4	C. K. Dyer	Pleuro-pneumonia	29 animals				565.00
4	Daniel Keller	do	Salary and expenses for April	131.90	81.05		
4	Henry W. Hanna	do	do	74.20	75.10		
5	F. W. Patterson	do	Salary for April	74.20			
5	W. H. Martenet	do	Salary and expenses for April	115.40	80.56		
		do	do	131.90	72.75		

6	W. H. Wray	do	75 animals	200.00	63.80	7.00	
9	J. T. Stepiens <i>et al</i>	Baltimore County	Salary and expenses for April	109.89	71.10		1,593.00
11	James A. Walrath	Pleuro-pneumonia	do	131.90	78.80		
13	William Dimond	do	do	82.40	33.50		
14	T. W. Spranklin	do	Salary and expenses, April 1 to 26	114.31	37.55		
14	J. C. Jackson	do	6 animals				120.00
17	Ellen Bechrend	Prince George's County	47 animals				950.00
17	Powell Harding <i>et al</i>	Baltimore County	21 animals				494.00
20	Rheinhard Heinemann <i>et al</i>	do	65 animals				1,523.00
31	E. W. Patterson	do	Salary and expenses, May	119.20	78.77		
June 3	Estate of Nimrod B. Dorsey	Pleuro-pneumonia	3 animals				75.00
7	C. K. Dyer	Howard County	Salary and expenses, May	136.20	77.84		
7	Henry W. Hanna	Pleuro-pneumonia	Salary for May	76.60			
7	Mrs. Conrad Schmidt <i>et al</i>	do	20 animals				595.00
		Baltimore County					
	Total			2,629.20	1,486.80	17.50	11,450.00
				8,081.02	4,708.39	334.76	23,952.00

ILLINOIS.

1886.							
Oct.	12	Guards	Salaries for September	646.63			
	16	W. H. Rose	Salary and expenses, September (part)	32.00	15.80		
	18	M. R. Trumbower	Salary and expenses, September and October (part)	48.00	27.48		
	21	Thomas J. Herr	Salary and expenses, September to October (part)	128.00	69.23		
Nov.	4	Guards	Salaries for October	2,610.20			
	6	D. E. Salmon	Expenses		132.20		
	6	H. W. Rowland	Salary and expenses, September	24.00	33.80		
	6	Sidney Shepherd (B. and O. R.)	Fare to Chicago		18.00		
	8	W. H. Rose	Salary and expenses, October	208.00	68.13		
	9	Thomas J. Herr	Salary and expenses, October (part)	104.00	59.60		
	9	J. W. Hawk	do	96.00	49.30		
	27	A. J. Murray	Salary and expenses, September to October (part)	120.00	80.20		
	30	Sidney Shepherd	Salary for November	88.04			
	30	do	Traveling and miscellaneous expenses		2.55	4.30	
Dec.	3	H. W. Rowland	Salary and expenses, October	208.00	146.00		
	10	W. H. Rose	Salary and expenses, November	200.60	53.55		
	10	Guards	Salary for November	2,529.60			
	17	Henry J. Beer	Salary, September 22 to November 30	380.41			
	17	Thomas J. Herr	Salary and expenses, November	208.00	92.10		
	17	M. R. Trumbower	Salary and expenses, October 4 to December 4	416.00	292.15		
	21	Kellogg, Johnson & Bliss, Chicago	Lanterns			2.70	
	21	A. J. Murray	Pair scissors			1.25	
			Pleuro-pneumonia				

Expended from the appropriation for 1886-'87, by States—Continued.

ILLINOIS—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.
1886. Dec. 29 31	Michael Miller, guarder. Henry J. Beer	Pleuro-pneumonia	Salary, October 5 to November 30 Salary for December	\$154.97 168.50			
1887. Jan. 5	W. H. Roso	do	Salary and expenses, December 1 to 21	144.00	\$1,072.09	\$8.25	
6	Guarders	do	Salaries for December	1,749.44			
10	Sydney Shepherd	do	Office expenses			39.00	
10	do	do	Salary for December	101.10			
10	M. R. Trumbower	do	Salary and expenses, December	176.00			
10	Thomas J. Herr	do	do	216.00	61.58		
11	A. D. Melvin	do	Salary and expenses, December 20 to 31	43.48	93.05		
Feb. 4	Thomas J. Herr	do	Salary and expenses, January	208.00	26.45		
4	James P. Cavanagh et al., guarders	do	Salaries for January	1,355.39	82.55		
5	Henry J. Beer	Pleuro-pneumonia	Salary for January	172.20			
5	A. D. Melvin	do	Salary and expenses for January	137.80	16.75		
7	Sidney Shepherd	do	Salary, January, and expenses, December to January	103.30	35.75	31.00	
7	M. R. Trumbower	do	Salary and expenses, January	208.00	72.55	3.65	
Mar. 7	Thomas J. Herr	do	Salary and expenses, February	192.00	77.79		
7	Sidney Shepherd	do	Salary and office expenses, February	93.40		28.00	
7	M. R. Trumbower	do	Salary and expenses, February	192.90	85.41	2.25	
7	A. D. Melvin	do	do	124.40	58.10		
9	Henry J. Beer	do	Salary for February	155.00			
9	James P. Cavanagh et al., guarders	do	Salaries for February	941.93			
14	C. E. McClunathan, guarder	do	Salary, 7 days	19.44		85.00	
11	M. R. Trumbower	For investigation	1 cow at \$40; 1 at \$45				
				6,333.48	650.98	188.90	
Apr. 2	Sidney Shepherd	Pleuro-pneumonia	Salary and office expenses, March	103.30		28.00	
4	A. D. Melvin	do	Salary and expenses, March	137.80	59.72		
5	Thomas J. Herr	do	do	216.00	90.63		
6	Rufus Chapin, et al.	Guarders	Salaries for March	1,238.76			
7	Henry J. Beer	Pleuro-pneumonia	Salary for March	172.20			
7	H. W. Rowland	do	Salary and expenses three days, November	24.00	5.00		
9	M. R. Trumbower	do	Salary, expenses, and office rent, March	216.00	43.84	25.00	
20	D. E. Salmon	do	Traveling expenses, etc		106.68	1.85	
May 3	Thomas J. Herr	do	Salary and expenses, April	208.00	11.65	.75	

3	Sidney Shephard.....	do	Salary and office expenses, April	98.90	33.70	
4	A. D. Melvin.....	do	Salary and office expenses, April	131.90	2.52	
4	Henry J. Beer.....	do	Salary for April	164.80		
4	Andrew W. Brodt <i>et al.</i>	do	Salaries for April	1,227.79		
5	M. R. Trumbower.....	Pleuro-pneumonia	Salary and expenses, April 1 to 27	184.00	4.50	1.10
11	Nathan Perkins.....	Serving notices	Salary and expenses, April, 4 days	8.00	.80	
11	Edward Rice <i>et al.</i>	Disinfectors	Salaries for April	287.00		
17	Fuller & Fuller Co.....	Chicago	Chloride of lime		68.77	
17	Keen & De Lang.....	do	Stationery		55.25	
17	Geo. G. Standart & Co.....	do	Supplies		167.85	
17	Peter Wickoff <i>et al.</i>	Cook County	9 animals			121.50
18	James Law.....	Pleuro-pneumonia	Salary and expenses, April 12 to 30; expenses, May (part).	340.00	82.60	66.51
18	Richard Jones <i>et al.</i>	Cook County	14 animals			211.00
19	Geo. Welter <i>et al.</i>	do	2 animals			47.50
24	S. M. Nickerson <i>et al.</i>	do	23 animals			378.25
28	Frank Dettler <i>et al.</i>	do	8 animals			133.00
31	Jas. Law.....	Pleuro-pneumonia	Expenses, May (part)		167.50	
June	Henry J. Beer.....	do	Salary, May	170.40		
3	Sidney Shephard.....	Pleuro-pneumonia	Salary and office expenses, May	115.38	33.75	
3	August Rother <i>et al.</i>	Cook County	19 animals			255.00
4	William S. Devoc.....	Pleuro-pneumonia	Salary and expenses, May	127.47	82.95	
4	Thomas J. Herr.....	do	do	208.00	13.25	8.25
4	James Law.....	do	do	520.00	54.60	170.50
6	W. B. Brinard <i>et al.</i>	Guarders	Salaries for May	1,255.92		
7	John Wilson <i>et al.</i>	Cook County	27 animals			411.63
				7,155.62	558.74	828.78
						1,557.89
July 23	The Office Toilet Supply Company.....					
Aug. 15	The Gutta Percha and Rubber Manufacturing Company.....	Chicago	Supplies, December to June			7.00
15	Kellogg, Johnson & Bliss.....	do	Rubber packers			6.00
		do	$\frac{1}{2}$ dozen boxes hog rings			1.35
					14.35	
	George C. Faville.....	Transportation	Denver to Pacific Junction		18.50	
	Total.....			21,859.45	2,300.31	1,040.28
	Grand total.....				26,757.92	1,557.88

Supplemental.

TEXAS.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.
1886. Aug. 7 Sept. 17	S. P. Cunningham.....do.....	Collecting information..... .....do.....	Salary and expenses, July Salary and expenses, August	\$150.00 150.00	\$127.45 94.50	..........	..........
Oct. 4 Nov. 6 Dec. 7	.....do..... .....do..... .....do.....	.....do..... .....do..... .....do.....	Salary and expenses, September..... Salary and expenses, October..... Salary and expenses, November.....	300.00 150.00 150.00	221.95 25.80 81.50 1.50	....................	....................
1887. Jan. 11 Feb. 7 Mar. 5	.....do..... .....do..... .....do.....	.....do..... .....do..... .....do.....	Salary and expenses, December..... Salary and expenses, January..... Salary and expenses, February.....	450.00 150.00 150.00	108.80 45.10 32.53 86.05	....................	....................
Apr. 4	.....do.....	.....do.....	Salary March, expenses February 27 to March 29	450.00	163.68	.....	.....
	Alex. Souther.....	Quarantining.....	Salary 10 days, December.....	150.00	74.65	.....	.....
	Total.....			50.00	.....	.....	.....
				200.00	74.65	.....	.....
				1,400.00	569.08	.....	.....

NEW JERSEY.

1886. Aug. 9 10 25	J. W. Hawk..... William B. E. Miller..... H. W. Rowland.....	Pleuro-pneumonia..... .....do..... .....do.....	Salary and expenses, July ..........do..... .....do.....	144.00 192.00 160.00	27.00 42.30 32.75	...............	...............
Nov. 6 Dec. 17	William B. E. Miller..... .....do.....	.....do..... .....do.....	Salary and expenses, October..... Salary and expenses, November.....	496.00 136.00 168.00	102.05 46.50 50.26	...............	...............
				304.00	96.76	.....	.....

1887.	do.	do.	Salary and expenses, December.	168.00	31.50	.....
Jan. 13	do.	do.	Salary and expenses, January	168.00	57.83	.....
Feb. 5	do.	do.	Salary and expenses, February	176.00	48.58	.....
Mar. 5	do.	do.		512.00	137.91	.....
Apr. 5	do.	do.	Salary and expenses, March	112.00	22.48	.....
May 17	H. W. Rowland	do.	Salary and expenses, March (part)	93.33	25.20	.....
May 25	William B. E. Miller	do.	Salary and expenses, April	88.00	14.00	.....
	H. W. Rowland	do.	do.	111.55	24.40	.....
				404.88	86.08	.....
	Total.			1,716.88	422.80	.....

NEW YORK.

1887.	W. H. Rose	Pleuro-pneumonia	Salary and expenses, March 29 to 30.	16.00	8.30	.....
Apr. 8	Guy C. Darrow <i>et al.</i>	Washington County	10 animals	.....	.....	\$149.16
May 13	W. H. Ross	Pleuro-pneumonia	Expenses, March 30	.....	2.00	.....
June 14	J. C. Jackson	do	Salary and expenses, April 27 to 30	17.59	9.70	.....
June 4	Nathaniel H. Voris	Westchester County	2 animals	.....	.....	40.00
	Total.		Total.	33.59	20.00	189.16

MASSACHUSETTS.

1887.	W. H. Rose	Pleuro-pneumonia	Salary and expenses, February 23, March 28 to 31.	240.00	127.07	.....
Apr. 8	D. E. Salmon	do	Expenses	.....	27.85	.....
May 13	W. H. Rose	do	Salary and expenses, March 26 and April	208.00	115.02	.....
Sept. 23	<i>Supplemental.</i> R. A. McLean	do	Salary and expenses, March 2 and 3	448.00	269.94	.....
	Total.		Total.	16.00	9.45	.....
				464.00	279.39	.....

VIRGINIA.

1887.	W. H. Rose	Pleuro-pneumonia	Team, 3 day, June.	.....	3.00	.....
Aug. 19						

Investigations.

Date.	Name.	Remarks.	For what paid.	For scientific investigations.	For collection of information.	For investigation of reported diseases.
1886.						
July 9	Alfred Barnett	For experiment station	7 pigs	\$21.00		
20	Theobald Smith	Investigating swine plague, Illinois	Traveling expenses, etc	76.18		
30	William Halley	Work in laboratory	Carpenter, 23½ days.	70.50		
31	Theobald Smith	Laboratory	Salary for July	151.60		
31	F. L. Kilborne	Experiment station	do	134.80		
31	B. F. Yasto	do	do	50.50		
Aug. 3	Andrew Clay	Laborer, experiment station	5 days	7.50		
4	H. J. Ruppert	Experiment station	Rent for July	40.00		
5	E. W. Perry	Collecting information	Salary for July		\$216.00	
6	W. H. Rose	Investigating reported diseases	Salary and expenses, July			\$278.20
6	William Blossingham	For experimental purposes	1 cow	25.00		
6	Perry Sanderlin & Co.	do	1 steer	35.00		
6	Elanora Mitchell	do	1 cow	15.00		
7	Church & Stephenson	For laboratory	Lumber	9.93		
7	S. H. Staudart	Collecting information	Salary, 14 days, July		140.00	
11	M. E. Trumbower	Investigating swine disease	Salary and expenses, July	128.18		
26	D. E. Salmon	For laboratory	Sundries	1.65		
28	Henry M. Taylor	Collecting information	Salary for July		270.00	
31	Theobald Smith	Laboratory	Salary for August	151.60		
31	F. L. Kilborne	Experiment station	do	134.80		
31	B. F. Yasto	do	do	50.50		
Sept. 2	F. L. Kilborne	For experiment station	Sundries	59.10		
2	Hutchins & Belz	For laboratory	do	13.10		
2	Z. D. Gilman	do	do	87.66		
2	W. H. Rose	Investigating reported diseases, etc	Salaries and expenses, August	96.75		136.75
3	Tice & Lynch	Laboratory	Charges on case instruments	12.60		
4	H. J. Ruppert	Experiment station	Rent for August	40.00		
4	Cooper Curcio	Laboratory	Salary for August	114.13		
4	E. W. Perry	Collecting information	do		208.00	
12	Theobald Smith	Investigating Texas fever, Virginia	Expenses of travel	4.40		
14	D. E. Salmon	do	Expenses of travel, etc	4.50		
15	D. W. Magrath	For experiment station	Expenses of travel, etc	9.75		
17	F. A. Belt	For laboratory	Repairs	3.08		
17	Carl Zoess	do	Sundries	196.34		
23	H. M. Taylor	Collecting information	Instruments		200.00	
30	Theobald Smith	Laboratory	Salary for August	146.80		
30	F. L. Kilborne	Experiment station	Salary for September	130.40		
30	B. F. Yasto	do	do	49.00		
				2,071.35	1,094.00	414.95

Investigations—Continued.

Date.	Name.	Remarks.	For what paid.	For scientific investigations.	For collecting information.	For investigation of reported diseases.
1886.						
Dec. 31	H. J. Ruppert.	Experiment station.	Rent for December	\$40.00		
31	Chesapeake and Potomac Telephone Company.	do	Rental, October to December	35.94		
1887.				3,065.56	\$1,404.00	\$73.75
Jan. 5	Cooper Curtice	Investigating sheep disease, Colorado	Expenses	254.92		
6	Cooper Curtice (A. Bezzel).	For experiment station	10 lambs, and delivery	26.00	208.00	
6	E. W. Perry.	Collecting information	Salary for December		270.00	
8	H. M. Taylor	do	do			
8	William H. Baum.	For experiment station	1 ton coal	6.50		
8	Theobald Smith	For laboratory	Sundries	2.25		
8	W. M. Galt & Co.	For experiment station	Feed, etc	347.09		
11	A. S. Mercer	Collecting information	Salary and expenses, September 21 to December 7		614.00	
11	L. H. Hopkins	For experiment station	Sundries	12.94		
25	N. H. Puren	Investigating reported diseases	Salary and expenses, November 25 to December 31			304.30
31	Theobald Smith	Laboratory	Salary for January	155.00		
31	F. L. Kilborne	Experiment station	do	137.80		
31	George Marx	Draughtsman	do	172.30		
31	B. F. Yaste.	Experiment station	do	51.70		
31	Cooper Curtice	Laboratory	do	120.60		
31	V. A. Moore	do	do	77.50		
31	Cooper Curtice	For experiment station	21 lambs, and delivery	43.25		
2	William Alexander, Jr.	do	2 days' labor	3.00		
2	W. H. Rose	Scientific and reported diseases	Salary and expenses, January	38.40		
3	H. J. Ruppert.	Experiment station	Rent for January	41.66		114.95
4	E. W. Perry	Collecting information	Salary and expenses for January		208.00	
5	Edw. B. Markham	For experiment station	9 pigs	27.00		
5	Henry M. Taylor	Collecting information	Salary for January		260.00	
7	Carl Zeiss.	Laboratory	Instruments	227.23		
10	George W. Rust	Collecting information	Salary and expenses, December and January		233.12	
12	James W. Queen & Co.	For laboratory	Color scale.	15.00		
16	Hutchins & Belz.	do	Sundries	23.50		
18	Z. D. Gliman	do	do	117.08		
23	R. M. Bell	Collecting information	Salary for January		120.00	
23	Fred. A. Schmidt.	Laboratory	Sundries	43.35		
28	Theobald Smith	Experiment station	Salary for February	140.00		
28	F. L. Kilborne	Draughtsman	do	124.40		
28	George Marx	Experiment station	do	155.60		
28	B. F. Yaste	Experiment station	do	46.60		

28	Cooper Curtice	Laboratory	do	108.80		
28	V. A. Moore	do	do	70.00		
1	Royce & Marean	For laboratory	Sundries	4.85		
2	H. J. Ruppert	Experiment station	Rent for February	41.06		
2	Jas. W. Queen & Co.	For laboratory	Sundries	6.85		
3	W. O. Chamberlain	do	Antimony tubing	4.00		
3	Washington Gas-Light Company	do	Gas stove	9.00		
7	E. W. Perry	Collecting information	Salary for February	192.00		
9	John A. Power & Co.	For laboratory	Sundries	60.48		
11	George W. Rust	Collecting information	Salary for February	140.00		
14	H. M. Taylor	do	do	240.00		
15	R. M. Bell	do	do	108.80		
17	N. H. Paaren	Investigating reported diseases	Salary and expenses January, and expenses December 15.	71.03		64.31
17	Louis Schmid & Sons	For experiment station	16 Guinea-pigs.	12.00		
17	The Cambridge Scientific Instrument Company.	For laboratory	Microtome, etc.	31.80		
18	Douglas Markham	For experiment station	2 pigs.	5.00		
23	Ephronzo Youngs	do	Prepared food	6.50		
26	F. M. Webster	Investigating buffalo gnat.	Expenses, March	32.55		
26	Melville Lindsay	For laboratory	Sundries	8.50		
31	Theobald Smith	Laboratory	Salary for March	155.00		
31	F. L. Kilborne	Experiment station	do	137.80		
31	George Marx	Draughtsman	do	172.20		
31	Cooper Curtice	Laboratory	do	137.80		
31	V. A. Moore	do	do	77.50		
31	B. F. Yaste.	Experiment station	do	51.70		
				3,615.59	2,594.52	483.56
2	Z. D. Gilman	For laboratory	Sundries	96.10		
2	do	do	do	3.95		
4	Royce & Marean.	do	do	1.50		
4	Theobald Smith	do	do	3.78		
4	Chesapeake and Potomac Telephone Company.	For experiment station	Telephone rental, January to March.	35.94		
4	H. M. Taylor.	Collecting information	Salary for March	270.00		
6	L. H. Hopkins	For laboratory	Sundries	46.59		
6	H. J. Ruppert	Experiment station	Rent for March.	41.66		
7	F. M. Webster.	Investigating buffalo gnat	Salary for March	51.61		
7	E. W. Perry	Collecting information	do	216.00		
8	W. H. Rose	Investigating reported diseases	Salary and expenses, February 18 to 22	47.40		
11	R. M. Bell.	Collecting information	Salary for March	120.60		
13	Louis Schmid & Sons.	For experiment station	Sundries	25.50		
15	Bullen & McKeever	do	Eight pigs.	25.50		
18	George W. Rust	Collecting information	Salary for March	155.00		
20	F. L. Kilborne	For experiment station	Sundries	17.83		
21	F. W. Jung & Co	For laboratory	Charges on case of instruments	53.48		
26	N. H. Paaren	Investigating reported diseases	Salary and expenses, April 12 to 16	9.80		
27	F. L. Kilborne	Investigating swine disease, Virginia	Expenses, April 21	61.00		
27	F. M. Webster	Investigating buffalo gnat	Expenses, March 19 to April 23	143.30		
30	Theobald Smith	Laboratory	Salary for April			

Investigations—Continued.

Date.	Name.	Remarks.	For what paid.	For scientific investigations.	For collecting information.	For investigation of reported diseases.
1887.						
Apr. 30	F. L. Kilborne	Experiment station	Salary for April	\$131.90		
30	George Marx	Draughtsman	do	164.80		
30	Cooper Curcio	Laboratory	do	131.90		
30	V. A. Moore	do	do	74.20		
30	B. F. Yost	Experiment station	do	49.50		
30	C. W. Winslow	do	do	49.50		
May 4	E. W. Perry	Collecting information	do		\$298.00	
5	M. E. Trumbower	Investigating reported disease	Salary and expenses, April 28 to 30			\$58.02
7	N. H. Pearson	do	Salary and expenses, January 24 and April 13 to 20		260.00	203.67
7	H. M. Taylor	Collecting information	Salary for April			
7	H. J. Ruppert	Experiment station	Rent for April	41.66		
10	Hermann Kohrbeck	For laboratory	Instruments	210.94		
11	F. M. Webster	Investigating buffalo gnat	Salary for April	80.00		
11	do	do	Expenses, April 24 to May 5	39.15		
13	Cooper Curcio	For laboratory	Sixteen animals	6.20		
13	George W. Rust	Collecting information	Salary for April		148.30	
14	R. M. Bell	Collecting information	Salary for April		115.40	
14	Fred. C. Preinkert	For experiment station	4 days' labor, May	8.00		
20	Z. D. Ghanan	For laboratory	Sundries	96.87		
25	H. W. Rowland	Investigating diseases, New York	Salary and expenses, April 15			33.10
31	Theobald Smith	Laboratory	Salary for May	153.40		
31	F. L. Kilborne	Experiment station	do	136.20		
31	George Marx	Draughtsman	do	170.40		
31	Cooper Curcio	Laboratory	do	136.20		
31	V. A. Moore	do	do	76.60		
31	C. W. Winslow	Experiment station	do	51.00		
June 3	F. M. Webster	Investigating buffalo gnat	Expenses for May	42.92		
3	do	do	Salary for May	80.00		
4	H. J. Ruppert	Experiment station	Rent for May	41.66		
4	E. W. Perry	Collecting information	Salary for May		208.00	
6	H. M. Taylor	do	do		200.00	
23	W. M. Galt & Co.	For experiment station	Food	531.40		
				3, 126.94	1, 961.30	392.19
July 29	H. M. Taylor	Collecting information	Expenses, April 20 to June 30		204.15	
Aug. 31	Cooper Curcio	Investigating sheep disease	Expenses, June 5-12	7.00		

Supplemental.

MISCELLANEOUS.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.
1886.						
July 27	John C. Parker.	Washington	Subscription to periodicals.	\$52.70		\$57.50
31	D. E. Salmon	do	Salary for July	126.40		
31	Miles Fuller	do	do	151.00		
31	W. J. Cowing	do	do	75.80		
31	Mary Sullivan	do	do	55.00		
31	A. W. Lockhart	do	do	60.00		
31	William Alexander	do	do			
31	D. E. Salmon	Directing work.	Traveling expenses		\$43.29	
Aug. 10	B. Westermann & Co.	Washington	Books.	252.70		32.91
31	D. E. Salmon	do	Salary for August.	126.40		
31	Miles Fuller	do	do	151.00		
31	W. J. Cowing	do	do	75.80		
31	Mary Sullivan	do	do	55.00		
31	A. W. Lockhart	do	do	69.00		
31	William Alexander	do	do			
Sept. 14	D. E. Salmon	Attending meeting at Buffalo	Traveling expenses.		44.55	
23	Western Union Telegraph Co		Charges, July and August		7.35	
27	George W. Knox.		Freight on case goods		1.38	
27	John C. Parker	Washington	Stationery		78.88	
30	D. E. Salmon	do	Salary for September	244.60		
30	Miles Fuller	do	do	122.20		
30	W. J. Cowing	do	do	146.80		
30	Mary Sullivan	do	do	73.40		
30	A. W. Lockhart	do	do	53.80		
30	William Alexander	do	do	58.80		
30	W. E. Mundell	Washington	Salary for September, 17 days	27.72		
				2,172.72	87.84	178.05
Oct. 6	B. Westermann & Co.		Books.			35.71
8	Chesapeake and Potomac Telephone Company.		Rental, July-September.			15.00
30	D. E. Salmon	Washington	Salary for October.	252.70		
					7,257.97	1,364.54
	Total			11,945.44		
	Cooper Curtice	Kansas City to Denver	Transportation	20.25		
	do	Denver to Kansas City	do	20.25		
	do	Kansas City to Denver	do	18.50		

MISCELLANEOUS—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.
1886.						
Oct. 30	Miles Fuller.	Washington	Salary for October.	\$126.40		
30	W. J. Cowing.	do	do	151.60		
30	Mary Sullivan.	do	do	75.80		
30	Annie W. Lockhart.	do	Salary for October, 22 days.	39.45		
30	William Alexander.	do	Salary for October.	60.60		
30	William E. Mundell.	do	do	50.50		
Nov. 2	Western Union Telegraph Co		Charges, September			\$12.98
6	D. E. Salmon.	Attending meeting at Toronto	Traveling expenses.		\$44.00	
9	W. E. Mundell.	Washington	Salary for November, 9 days	14.67		
16	Library Bureau		Cards			3.60
26	Western Union Telegraph Co		Charges, October	244.60		16.61
30	D. E. Salmon.	Washington	Salary for November	122.20		
30	Miles Fuller.	do	do	146.80		
30	W. J. Cowing.	do	do	73.40		
30	Mary Sullivan.	do	do	58.80		
Dec. 7	William Alexander.	do	do			
7	J. C. Parker.	Indiana and Chicago.	Traveling expenses.		82.74	
10	Adams Express Company		Stationery.			24.88
10	B. Westermann & Co.		Transportation charges.			7.90
23	W. B. Moses & Son.		Books.			10.90
29	Western Union Telegraph Co		Office furniture.			156.50
31	D. E. Salmon.	Washington	November charges.			15.49
31	Miles Fuller.	do	Salary for December.	252.70		
31	W. J. Cowing.	do	do	126.40		
31	Mary Sullivan.	do	do	151.60		
31	William Alexander.	do	do	75.80		
31	Sammel Gregg.	do	do	60.60		
31	W. B. Moses & Son	do	8 days; carpenter.	24.00		
31	Chesapeake and Potomac Telephone Company.		1 wardrobe.			22.00
31			Rental, October-December, and 1 call to Baltimore.			15.25
1887.				2, 108.62	126.74	336.82
Jan. 5	W. H. Rose	Ordered to Washington	Salary and expenses, December 22 and 23.	16.00	24.25	
13	George S. Davis		Subscription to periodical			10.00
13	Capitol, North O Street and South Washington Rwy Co.		300 street-car tickets.			12.50
14	Western Union Telegraph Co.		Charges, December.			49.32
17	John C. Parker		Stationery.			155.39
17	Journal of Comparative Medicine and Surgery.		1 subscription			2.00

19	Baltimore and Ohio R. R. Express.	Washington	Transportation charges	258.30	57.95
31	D. E. Salmon	do	Salary for January	129.20	
31	Miles Fuller	do	do	155.00	
31	W. J. Cowing	do	do	86.10	
31	Mary Sullivan	do	do	62.00	
31	William Alexander	do	24 days, carpenter, January	72.00	
31	Samuel Gregg	do	10½ days, carpenter, January	31.50	
31	Richard H. Bailey	do	Transportation charges		
7	Adams Express Company	do	Books		18.80
15	R. Westermann & Co.	do	Charges, January		212.65
16	Western Union Telegraph Co.	do	Sundries		28.00
23	Wyckoff, Seamans & Benedict.	Washington	Carpenter, 16½ days, February	49.50	4.30
28	Samuel Gregg	do	Carpenter, 24 days, February	72.00	
28	Richard H. Bailey	do	Salary for February	233.40	
28	D. E. Salmon	do	do	116.60	
28	Miles Fuller	do	do	140.00	
28	W. J. Cowing	do	do	77.80	
28	Mary Sullivan	do	do	50.00	
28	William Alexander	do	Salary for February (7 days)	26.25	
28	Robert S. Forbes	do	Charges, December and January		3.05
Mar. 3	Baltimore and Ohio Telegraph Company.	do	Books		10.00
3	Lawyers Co-operative Publishing Company.	do	Charges, February		8.70
22	Western Union Telegraph Co.	do	Office furniture		19.50
24	W. B. Moses & Son	do	Carpenter, 16½ days, March	48.75	
26	Samuel Gregg	do	Locks		8.55
31	Elisha T. Jenks	Washington	Salary for March	238.30	
31	Miles Fuller	do	do	129.20	
31	W. J. Cowing	do	do	155.00	
31	Mary Sullivan	do	do	86.10	
31	William Alexander	do	do	62.00	
31	Robert S. Forbes	do	Salary for March	101.25	
31	Richard H. Bailey	do	Carpenter, 10½ days, March	31.50	
Apr. 4	Chesapeake and Potomac Telephone Company.	do	Telephone rental, January to March.	2,453.75	600.41
7	Church & Stephenson	do	Lumber		15.00
7	Adams Express Company	do	Transportation charges		65.01
7	H. W. Rowland	do	Expenses (traveling), November		6.00
9	Wyckoff, Seamans & Benedict.	do	Paper	30.00	
9	B. Westermann & Co	do	Books		11.80
20	D. E. Salmon	do	Traveling expenses	12.45	15.74
21	John C. Parker	do	Stationery		114.67
27	Western Union Telegraph Co	do	Char. e, March		7.15
27	F. L. Kilborne	do	Expenses, February 25 and March 18.	7.30	
28	Baltimore and Ohio Telegraph Co	do	Charges, March		1.53
30	D. E. Salmon	do	Salary for April	247.25	
30	Miles Fuller	do	do	123.60	

MISCELLANEOUS—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.
1887.						
Apr. 30	W. J. Cowing	Washington	Salary for April	\$148.30		
30	E. B. Jones	do	Salary for April, 27 days	89.01		
30	Mary Sullivan	do	Salary for April	82.40		
30	Wm. Alexander	do	do	59.30		
30	R. P. Logan	do	Salary for April, 33 days	45.49		
30	M. T. Dent	do	Salary for April, 27 days	48.95		
30	Robert S. Forbes	do	Salary for April	97.50		
30	Fred. A. Bickford	do	Salary for April, 6 days	9.00		
3	F. M. Cowing	do	2 chair rests			\$15.00
11	W. B. Moses & Son	do	Office furniture			22.25
19	Judd & Detweiler	do	Tablets and stereotypo plates			41.00
31	D. E. Salmon	Washington	Salary for May	255.50		
31	Miles Fuller	do	do	127.80		
31	W. J. Cowing	do	do	153.40		
31	Mary Sullivan	do	do	85.20		
31	William Alexander	do	do	61.40		
31	R. P. Logan	do	do	61.40		
31	E. B. Jones	do	do	102.20		
31	Mary T. Dent	do	do	56.20		
31	Robert S. Forbes	do	do	97.50		
31	F. A. Bickford	do	do	37.50		
				<u>1,988.90</u>	<u>\$19.75</u>	<u>315.15</u>
Sept. 19	Western Union Telegraph Co.		Charges, April 12 and 30			1.21
	Total			<u>8,723.99</u>	<u>288.58</u>	<u>1,431.64</u>

Supplemental.

Total amount expended of the appropriation made immediately available March 3, 1887.

	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.	Total.	No. of affected cattle.	No. of exposed cattle.
New York.....	\$888.10	\$480.26	.....	\$619.00	\$8,201.00	\$10,218.36	32	380
New Jersey.....	695.69	262.87	\$20.00	470.00	360.00	1,808.56	16	12
Maryland.....	2,617.91	1,206.38	14.00	2,014.00	12,736.00	18,588.29	85	515
Illinois.....	6,807.44	541.44	1,579.32	1,270.50	10,667.73	20,866.43	52	665
Vermont, Massachusetts, Pennsylvania, Virginia, and District of Columbia.....	592.00	279.93	.....	.....	113.50	945.43	.....	4
Texas.....	346.65	193.70	.....	.....	.....	540.35	.....	.....
For scientific investigations.....	839.86	106.20	436.08	.....	.....	1,382.14	.....	.....
For the collection of information.....	1,004.30	112.16	256.02 436.08	.....	.....	1,416.46	372	.....
For investigation of reported diseases.....	32.00	16.13	.....	48.13	.....	.....	.....	.....
Other salaries and expenses.....	950.65	2.85	792.61	.....	.....	1,746.11	.....	.....
Total.....	14,774.60	3,161.92	2,842.01 3,098.01	4,403.50	32,078.23	57,960.26	186	1,576

Expended from the appropriation made immediately available March 3, 1887, by States.

MARYLAND.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887.								
Apr. 13	A. P. Forsyth.	Howard County	14 animals.					\$375.00
13	S. and N. Regester	Baltimore County	12 animals.					200.00
14	Julius Sachs & Son	do	6 animals					60.00
14	D. M. Nesbit.	Prince George County	12 animals.					360.00
22	C. F. Miller	Baltimore County	2 animals					46.00
22	Theodore Marling	do	8 animals					64.00
May 3	Transisko Herring	do	2 animals					40.00
3	Henry Schaeffer	do	2 animals					40.00
3	George Frell.	do	4 animals					80.00
3	John Loeber.	do	9 animals					252.00
9	John H. Gross	do	6 animals					150.00
9	John Clay	do	8 animals					120.00
9	Herman Gerken, jr., et al.	do	24 animals					463.00
17	J. G. Bauerlein et al.	do	32 animals					714.00
17	Elon Behrend	Prince George's County	7 animals					128.00
20	Andreas Hermann et al.	Baltimore County	47 animals					1,380.00
31	John E. McLain et al.	do	52 animals					1,256.00
June 3	Estate of Nimrod B. Dorsey	Howard County	15 animals					395.00
7	Hermann Gerken, jr., et al.	Baltimore County	13 animals					355.00
8	James A. Walrath	Pleuro pneumonia	Salary and expenses, May	\$136.20	\$81.52			
8	W. H. Wray	do	Salary and expenses, May 2 to 5 and 9 to 31.	240.00	65.10	\$7.00		
8	Daniel Keller	do	Salary and expenses, May	76.60	77.26			
8	William Dimond	do	Salary and expenses, May 1 to 29	127.41	78.40			
8	M. R. Trumbower	do	Salary and expenses, May 14 to 21 and 24 to 31.	112.00	56.33			
8	W. H. Martoret	do	Salary and expenses, May	136.20	79.21			
8	D. E. Salmon.	do	Expenses, April 23 and May 20.		6.10			
10	A. W. Clement.	do	Salary and expenses, April (part) and May.	207.80	91.79			
10	T. W. Spranklin	do	Salary and expenses, May	85.20	33.50			
14	Lewis Zaizer et al.	Baltimore County	11 animals				\$271.00	869.00
14	Philipp Wagner et al.	do	35 animals					626.00
17	Moses Fox et al.	do	27 animals				329.00	
17	Moses Fox et al.	do	14 animals					
23	John N. Foss	do	44 animals				460.00	900.00
23	do	do	23 animals					
25	J. C. Tuttleton	do	18 animals				58.00	522.00
25	do	do	2 animals					
				1,121.41	569.21	7.00	1,118.00	9,395.00

Supplemental.

1887.	6	M. R. Trimbow	Pleuro-pneumonia	Salary and expenses, June.	69.60	208.00	551.00	7.00	3,241.00
July	7	W. H. Wray	do	do	50.00	250.00			
	7	Ephraim Mallonee <i>et al.</i>	Baltimore County	112 animals					
	7		do	22 animals					
	9	W. H. Martenet	Pleuro-pneumonia	Salary and expenses, June.	74.85	131.90			
	9	C. K. Dyer	do	do	79.90	131.90			
	9	A. W. Clement	do	do	47.20	148.30			
	9	Henry W. Hanna	do	Salary for June	82.40	82.40			
	9	Daniel Keller	do	Salary and expenses, June	75.10	82.40			
	9	James A. Walrath	do	do	70.13	131.90			
	13	F. W. Patterson	do	do	115.40	115.40			
	13	Albert Hassall	do	do	110.19	131.90			
	16	T. W. Spranklin	Pleuro-pneumonia	Salary and expenses, June.	21.70	82.40			
	16	D. E. Salmon	do	Expenses, May 31 to June 1	33.50				
Aug. 31	19	Jos. M. C. Barton	Baltimore County	4 animals	5.00				
Nov. 19		do	do	13 animals					
		Total			1,206.38	2,617.91	345.00	14.00	12,736.00
					88.58	148.55	345.00	14.00	3,241.00
					2,577.77	2,617.91	345.00	14.00	12,736.00

ILLINOIS.

1887.	3	Christoph Battermann	Cook County	1 animal	30.00				
May	17	John Keefe	do	5 animals	120.00				
	17	Meri Larson	do	2 animals	75.00				
	17	Fred. Niles	do	1 animal	45.00				
	17	August Panzke	do	do	22.00				
	17	Jolanne Regel	do	13 animals	26.00				
	17	T. J. Sprague	do	1 animal	99.50				
	17	William Schuth	do	19 animals	23.00				
	17	Charles Sichel	do	48 animals	168.00				
	17	Hermann Schalk <i>et al.</i>	do	24 animals	784.50				
	18	Henry Jurs <i>et al.</i>	do	8 animals	368.00				
	19	Fred. Schwemer <i>et al.</i>	do	106 animals	189.00				
	24	Thomas Haley <i>et al.</i>	do	23 animals	1,804.25				
	28	Louis Sonnenschein <i>et al.</i>	do	75 animals	399.00				
June	3	August Rother <i>et al.</i>	do	2 animals	870.25				
	7	Henry Pauly	do	87 animals	62.00				
	7	Economy Furniture Company	Chicago	Desk and chair	26.00				
	7	Keen & De Lang	do	Stationery	35.63				
	7	The Gutta, Percha Manufac-	do	Sundries	105.64				
	7	uring Company	do	do	54.97				
	7	George M. Standart & Co	do	Disinfecting stables	51.00				

Expended from the appropriation made immediately available March 3, 1887, by States—Continued.
ILLINOIS—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887, June	A. D. Melvin.....	Pleuro-pneumonia.....	Salary and expenses, May.....	\$136.20	\$4.40	.....	.....	.....
7	George C. Paville.....	do.....	Salary and expenses, May 12-31.....	120.00	35.75	.....	.....	.....
8	Boyer Talbot.....	do.....	Salary and expenses, May.....	192.00	46.80	.....	.....	.....
8	M. R. Trumbower.....	do.....	Salary and expenses, May 2 to 13.....	88.00	25.95	.....	.....	.....
9	N. H. Parn.....	do.....	do.....	152.00	6.48	.....	.....	.....
9	Walter F. Landreth.....	Disinfector.....	Salary for May.....	85.17	.....	.....	.....	.....
9	William J. Watt <i>et al.</i>	Disinfectors.....	Salaries for May.....	927.00	.....	.....	.....	.....
10	James Anderson.....	Pleuro-pneumonia.....	Salary and expenses, May 15 to 31.....	74.73	38.85	\$191.50	.....	.....
14	H. Rice & Son.....	Chicago.....	Lime.....	.....	.....	76.40	.....	.....
14	David M. Nat Smith.....	Marking cattle.....	Salary for May.....	57.50	.....	.....	.....	.....
14	Margaret Kelly <i>et al.</i>	Chicago.....	Disinfecting.....	.....	.....	.....	\$29.00	.....
14	Edward George <i>et al.</i>	Cook County.....	2 animals.....	.....	.....	.....	.....	.....
14	Margaret Kelly <i>et al.</i>	do.....	21 animals.....	.....	.....	96.80	.....	.....
14	Fuller & Fuller Co.....	Chicago.....	Chloride of lime.....	.....	.....	.....	.....	1,518.50
17	Frederick Hoffmann <i>et al.</i>	Cook County.....	98 animals.....	.....	.....	22.00	.....	.....
17	Johann Rosentreter <i>et al.</i>	Chicago.....	Disinfecting.....	.....	8.70	.....	.....	.....
17	Nathan Perkins <i>et al.</i>	Taggers, etc.....	Salary and expenses, May.....	88.00	63.00	.....	.....	.....
17	Bushnell & Bassler.....	Chicago.....	Hire of team, May.....	208.00	11.96	.....	.....	.....
17	John P. Bond.....	Pleuro-pneumonia.....	Salary and expenses, May.....	.....	.....	.....	592.50	.....
17	Samuel Warren <i>et al.</i>	Cook County.....	26 animals.....	.....	.....	12.00	.....	.....
17	Lawrence McDonald <i>et al.</i>	Chicago.....	Disinfecting.....	.....	.....	209.50	.....	.....
22	Ira L. Harvey <i>et al.</i>	do.....	do.....	.....	.....	328.50	.....	.....
22	Joe Schmitt <i>et al.</i>	do.....	56 animals.....	.....	.....	.....	.....	.....
22	N. Krogh <i>et al.</i>	Cook County.....	7 animals.....	.....	.....	.....	170.00	1,050.23
22	Alex. McDonald <i>et al.</i>	do.....	39 animals.....	.....	.....	.....	.....	998.00
27	Nioli Jensen <i>et al.</i>	do.....	11 animals.....	.....	.....	.....	319.00	.....
27	do.....	do.....	Disinfecting.....	.....	.....	48.60	.....	.....
27	Margaretka Stegner <i>et al.</i>	Chicago.....	.....	.....	.....	.....	.....	.....
				2,125.60	2,111.87	1,558.54	1,172.56	10,097.91
July	W. J. Watt <i>et al.</i>	Disinfectors.....	Salaries for June.....	1,006.50	.....	.....	.....	.....
7	H. A. Brown <i>et al.</i>	Quarantining and herding.....	do.....	1,391.64	.....	.....	.....	.....
9	George G. Standart & Co.....	Chicago.....	Sundries.....	.....	6.35	79.00	.....	.....
9	N. H. Poaren.....	Pleuro-pneumonia.....	Salary and expenses, June.....	208.00	17.41	.....	.....	.....
9	Thomas J. Herr.....	do.....	do.....	520.00	1.04	10.80	.....	.....
11	James Law.....	do.....	do.....	.....	.....	.....	82.40	.....
11	Walter F. Landreth.....	Quarantining and herding.....	Salary for June.....	54.00	1.80	.....	.....	.....
11	Nathan Perkins.....	do.....	Salary and expenses, June.....	65.00	11.00	.....	.....	.....
11	B. F. Davis.....	Chicago.....	Disinfecting.....	.....	.....	25.00	.....	.....
11	Charles Borcart <i>et al.</i>	do.....	.....	.....	.....	.....	.....	.....

Supplemental.

	Cook County	4 animals			
11	Sophia Hoelscher <i>et al.</i>	do	28 animals		569.75
11	Catherine Griffin <i>et al.</i>	do	Sundries	24.40	
11	Furness Bros	Chicago	Chloride of lime	32.30	
11	Fuller & Fuller Co.	do	Stationery	17.68	
11	Keen & De Lang	do			
11	Bower Talbot	Pleuro-pneumonia	Salary and expenses, June	11.35	
11	John P. Bond	do	do	208.00	
12	James Anderson	do	do	208.00	
12	William S. Devroe	do	do	8.75	
12	A. D. Melvin	do	do	20.80	
12	George C. Faville	do	do	131.90	
12	Sidney Shephard	do	do	7.30	
13	Dunklee & Co.	do	do	131.90	
13	Bushnell & Bassler	Chicago	Salary and office expenses, June	2.85	
13		do	Team hire, June	31.40	
13		do	do	208.00	
13				123.00	
13				95.00	
13				72.00	
Aug 15	H. Rice & Son	do	98 barrels lime	4,078.84	569.75
Aug 15	George C. Faville	Pacific Junction to Chicago	Transportation	287.05	98.00
Aug 15	Total			12.50	
Aug 15	Grand total			541.44	1,579.32
Aug 15					1,270.50
Aug 15					10,667.73
Aug 15					\$20,866.43

NEW YORK.

Month	No.	Name	Locality	Remarks	No. of animals	Value
May	5	John C. Batie	Washington County		12 animals	285.00
	5	Sanford McNitt	do		2 animals	25.00
	5	Henry R. Wilson	do		1 animal	15.00
	5	Peter Cowan	do		do	13.50
	5	George Austin	do		do	13.50
	5	Addison W. Rea	do		do	13.50
	5	William D. Dixon	do		do	13.50
	5	John Shields	do		do	13.50
	5	William McDougall	do		do	13.50
	5	Alexander Beatie	do		do	12.00
	5	Guy C. Darrow	do		do	265.00
	5	Nathaniel H. Voris	do		14 animals	131.00
June	8	W. H. Wray	Westchester County		7 animals	
	10	J. C. Jackson	Pleuro-pneumonia	Salaries and expenses, May 6 and 7.	14.18	
	17	Harvey Voris <i>et al.</i>	do		88.95	
	17	Abram Bare <i>et al.</i>	Westchester County		53 animals.	
	17	W. H. Rose	do		7 animals	
	20		Pleuro-pneumonia	Salary and expenses, May, 5 days.		943.50
	25	Frank Parano	Westchester County		1 animal.	
						141.00
						20.00
						161.00
					127.58	1,757.50

Expended from the appropriation made immediately available March 3, 1887, by States—Continued.
NEW YORK—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887. July 11	<i>Supplemental.</i> Denton Pearsall	Westchester County	6 animals				\$48.00	\$88.00
11	do	do	4 animals					
16	W. H. Rose	Pleuro-pneumonia	Salary and expenses, June 1 to 4	\$32.00	\$8.35			
19	E. B. Brady	Westchester County	278 animals					
19	do	do	20 animals				48.00	88.00
16	J. C. Jackson	Pleuro-pneumonia	Salary and expenses, June 28	131.90	28.60			
Aug. 15	Ch. B. Michener	do	Expenses, June 18 to 21	8.00	3.91			
31	D. E. Salmon	do	Salary and expenses, June	208.00	116.37			
Sept. 23	R. A. McLean	do	Salary and expenses, May 2 and 10 to 31	152.00	78.92			
23	do	do	Salary and expenses, April 4 to 22 and 28 to 30.	160.00	89.63			
23	do	do						
	Total			691.90	352.68		440.00	6,355.50
				887.10	480.26		649.00	8,201.00
MASSACHUSETTS.								
1887. Mar. 16 June 20	W. H. Rose Benjamin Bond et al.	Pleuro-pneumonia Suffolk County	Salary and expenses, May, 17 days 3 animals	136.00	23.00			
								100.00
				136.00	23.00			100.00
June 16 Sept. 23	<i>Supplemental.</i> W. H. Rose R. A. McLean	Pleuro-pneumonia do	Salary and expenses, June 6 and 7 Salary and expenses, April 1 to 3 and 23 to 27.	16.00 48.00	7.90 34.63			
23	do	do	Salary and expenses, March 4 to 31	192.00	107.90			
				256.00	150.43			
	Total			392.00	173.43			1,122.20

NEW JERSEY.

1887. June 8	William Dimond.....	Pleuro-pneumonia.....	Salary and expenses, May 30 and 31.....	8. 79	6. 42		
9	D. E. Salmon.....	do.....	Expenses, April 29.....	128. 00	9. 20		
10	William B. E. Miller.....	do.....	Salary and expenses, May.....	119. 20	36. 78		
11	H. W. Rowland.....	do.....	do.....	255. 99	7. 00		
	<i>Supplemental.</i>				59. 40		
July 6	William B. E. Miller.....	Pleuro-pneumonia.....	Salary and expenses, June, and expenses, May 26.....	176. 00	65. 32		
9	Job M. Winans.....	Union County.....	14 animals.....			420. 00	
9	do.....	do.....	12 animals.....				360. 00
11	Samuel R. Gilbert.....	Burlington County.....	1 animal.....			30. 00	
12	William Dimond.....	Pleuro-pneumonia.....	Salary and expenses, June.....	148. 20	117. 55	\$20. 00	
				324. 30	182. 87	20. 00	360. 00
July 16	H. W. Rowland.....	Pleuro-pneumonia.....	Salary and expenses, June.....	115. 40	20. 60		
Aug. 15	Hugh Sutherland.....	Hudson County.....	1 animal.....			20. 00	
				115. 40	20. 60		
	Total.....			695. 69	262. 87	20. 00	360. 00

VIRGINIA.

1887. June 8	M. R. Trumbower.....	Pleuro-pneumonia.....	Salary and expenses, May 23.....	8. 00	3. 55		
	<i>Supplemental.</i>						
July 16	W. H. Rose.....	Pleuro-pneumonia.....	Salary and expenses, June 16-30.....	104. 00	13. 90		
	Total.....			112. 00	17. 45		

Expended from the appropriation made immediately available March 3, 1887, by States—Continued.

TEXAS.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887. June 8	S. P. Cunningham.....	Collecting information.....	Salary and expenses, April 1 to 10, and expenses March 29-30.	\$50 00	\$45. 15	.....	.....	.....
10	T. T. D. Andrews	do	Salary May 2 to 31.	148. 35	.....	.....	.....	.....
	<i>Supplemental.</i>			198. 35	45. 15	.....	.....	.....
July 25	T. T. D. Andrews	Collecting information	Salary and expenses, June.....	148. 30	148. 55	.....	.....	.....
	Total.....	.....	.....	346. 65	193. 70	.....	.....	.....

DISTRICT OF COLUMBIA.

1887. July 16	<i>Supplemental.</i> W. H. Rose	Pleuro-pneumonia	Salary and expenses, June 8 to 15.....	40. 00	16. 51
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VERMONT.

1887. May 5	John George Johnston.....	Bennington County	1 animal.....	\$13. 50
	<i>Supplemental.</i>							
Sept. 23	R. A. McLean.....	Pleuro-pneumonia	Salary and expenses, May 3 to 9	48. 00	23. 84	.....	.....	.....
	Total .....	.....	.....	48. 00	23. 84	.....	.....	13. 50

PENNSYLVANIA.

1887. June 9	D. E. Salmon.....	Pleuro-pneumonia	Expenses, April 23.....	8. 70
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Expended from the appropriation made immediately available March 3, 1887, by States—Continued.

INVESTIGATIONS—Continued.

Date.	Name.	Remarks.	For what paid.	For scientific investigations.	For collecting information.	For investigation of reported diseases.
1887. July 13	Cooper Curtice L. Mangum	Investigating sheep disease For experiment station	Expenses for June Ice, April to June	\$93.24 14.88		
23 Aug. 31	Z. D. Gilman F. M. Webster R. M. Bell do	For laboratory Investigating buffalo gnats Collecting information do	Sundries Expenses, June 20 and 30 Expenses, May Salary and expenses, June	384.28 45.41 4.70	\$616.30 46.61 180.95	
1888 May 10	Total. <i>Sgt. H. Rust</i>		50.11 1,382.14		227.56 1,116.46	\$48.13

article on "Calf Raising on the Plains"
1,372.46

MISCELLANEOUS.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.
1887. June 7	M. P. Rice		6 photo-prints			\$1.20
8	J. C. Parker		Stationery			118.28
13	B. Westermann & Co.		Books			13.00
16	Baltimore and Ohio Telegraph Company.		Charges, April and May			3.06
17	Western Union Telegraph Co		do			32.64
17	F. A. Balt.	For book-cases	Charges, May			12.68
23	D. E. Salmon	Washington	Molding, etc.	\$247.25		9.00
30	Miles Fuller	do	Salary for June.	123.60		
30	W. J. Cowing	do	do	148.30		
30	E. B. Jones	do	do	38.90		
30	Mary Sullivan	do	do	82.40		
30	R. P. Logan	do	do	59.30		

30	Mary T. Dent.....	do	do	54.40			
30	Robert S. Forbes.....	do	do	97.50			
30	F. A. Bickford.....	do	do	39.00			
				950.65			189.86
	<i>Supplemental.</i>						
July 5	John C. Parker.....		Stationery.....				27.25
9	Herman Baumgarten.....		100 badges and die.....				115.00
11	Chesapeake and Potomac Telephone Company.....		April-June.....				15.00
23	F. L. Kilborne.....		Expenses examining cattle at Baltimore quarantine.....				157.25
23	Western Union Telegraph Co.....		Charges June.....		\$2.85		6.35
Aug. 22	A. S. Abell & Co.....		Baltimore Sun.....		2.85		6.35
22	Charles C. Fulton & Co.....		Baltimore American.....				54.90
20	The New York Times.....		do.....				48.75
3	The World.....		do.....				96.00
7	The Chicago Times.....		do.....				87.00
21	The Tribune Company.....		Chicago.....				72.50
							80.00
					2.85		445.50
	Total.....			950.65		2.85	792.61

Total amount expended of the appropriation for 1887-'88, exclusive of that made immediately available March 3, 1887.

	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.	Total.	No. of affected cattle.	No. of exposed cattle.
New York	\$3,329.16	\$1,262.85	\$54.23	\$4,313.27	\$6,217.41	\$15,176.92	166	301
New Jersey	1,700.30	868.69	136.05	1,450.00	2,136.00	6,291.04	62	80
Maryland	6,092.71	2,635.72	579.70	5,221.91	24,786.99	39,247.03	201	876
Illinois	17,563.02	687.69	1,169.73	351.15	3,303.01	23,074.60	18	194
Pennsylvania, Virginia, and District of Columbia.	1,561.92	442.03	.....	.....	.....	2,003.95	.....	.....
Texas	425.57	112.00	.....	.....	.....	537.57	.....	.....
For scientific investigations	3,066.11	313.91	798.89	.....	.....	4,178.91	.....	.....
For the collection of information	2,841.60	864.66	.....	.....	.....	3,706.26	.....	.....
For investigation of reported diseases	260.00	146.86	2.20	.....	.....	409.06	.....	.....
Other salaries and expenses	6,337.67	101.85	703.27	.....	.....	7,142.79	.....	.....
Total	43,108.06	7,432.26	3,444.07	11,336.33	36,443.41	101,764.13	447	1,451

Expended from the appropriation for 1887-'88, exclusive of that made available March 3, 1887, by States.

MARYLAND.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887.								
July 19	B. F. Collison	Anne Arundel County	11 animals					\$264. 00
19	do	do	3 animals				\$70. 00	300. 00
19	George Prell	Baltimore County	10 animals					565. 00
30	William E. Addison <i>et al.</i>	do	21 animals					
30	Clay & Welker <i>et al.</i>	do	5 animals				135. 00	
Aug. 1	James A. Walrath	Pleuro-pneumonia	Salary and expenses, July	\$134. 80	\$48. 25			
2	F. W. Patterson	do	do	117. 90	55. 45			
2	M. R. Trumbower	do	do	208. 00	63. 05			
4	Daniel Keller	do	do	84. 20	74. 50			
4	W. H. Martenet	do	do	134. 80	70. 25			
4	Albert Hassall	do	do	134. 80	40. 80			
6	C. K. Dyer	do	do	134. 80	77. 95			
15	Alois Auf <i>et al.</i>	Baltimore County	14 animals					
15	do	do	68 animals				473. 40	
15	Julius Jordan	For investigation	1 ox and 1 cow			\$55. 00		2, 496. 60
15	W. H. Wray	Pleuro-pneumonia	Salary and expenses July	260. 00	63. 00			
15	Henry W. Hanna	do	Salary for July	84. 20				
15	A. W. Clement	do	Salary and expenses July	151. 60	63. 10			
16	T. W. Spranklin	do	do	84. 20	30. 50			
19	W. H. Rose	do	do	8. 00	. 44			
19	William Helmstetter	do	Salary and expenses July 27.				241. 56	429. 44
19	do	Anne Arundel County	9 animals					
19	W. H. Russell <i>et al.</i>	do	16 animals				482. 00	
19	John T. Weigel <i>et al.</i>	Baltimore County	18 animals					2, 888. 00
19	W. T. Stevens	do	100 animals					50. 00
19	John W. Kaldenbach	do	2 animals				30. 00	
20	Samuel Sacks <i>et al.</i>	Baltimore County	1 animal				1, 032. 55	
20	do	do	36 animals					3, 698. 45
25	Mary Lyons	do	1 animal				65. 00	
30	James Lyons <i>et al.</i>	do	3 animals					
30	do	do	63 animals					
30	John W. Gregory	Prince George County	7 animals					
30	do	do	45 animals					
30	do	do	Salary for August	84. 20				
30	do	Pleuro-pneumonia	Salary and expenses, August.				280. 00	1, 542. 00
30	Henry W. Hanna	do	do					1, 546. 00
Sept. 3	Daniel Keller	do	Salary for August, August.					
3	E. W. Patterson	do	Salary for August (part)	79. 00				
6	C. K. Dyer	do	Salary for August	117. 90	106. 95			
6	W. H. Martenet	do	Salary for August and expenses, 3 days July.	82. 62	60. 45			
6	A. W. Clement	do	Salary for August	134. 80	79. 85			
6	do	do	Salary for August and expenses, 3 days July.	151. 60	94. 65			
6	E. C. Schroeder	do	Salary for August 20 to 31	32. 61				

Expended from the appropriation for 1887-'88, exclusive of that made available March 3, 1887, by States—Continued.

MARYLAND—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887.								
Sept. 7	Albert Hassall	Pleuro-pneumonia.	Salary and expenses, August.	\$134.80	\$56.95			
7	W. H. Wray	do	Salary and expenses August 1 to 29, and office rent, July and August.	250.00	46.90	\$14.00		
7	Joseph Weinmann <i>et al.</i>	Baltimore County	59 animals					\$1,618.50
7	do	do	10 animals				\$267.50	
8	George C. Faville	Pleuro-pneumonia	Salary and expenses, August (part)	88.00	49.10			
9	W. H. Rose	do	Salary and expenses, August 4	8.00	1.15			
9	T. W. Spranklin	do	Salary and expenses for August.	84.20	33.50			
12	John Clay <i>et al.</i>	Baltimore County	21 animals				532.50	
12	do	do	30 animals					796.50
12	C. Ruhl <i>et al.</i>	do	43 animals					1,227.50
12	do	do	4 animals				94.50	
15	M. R. Trumbower	Pleuro-pneumonia	Salary and expenses, August, 4 days.	32.00	12.50			
23	James W. Lee	Anne Arundel County	3 animals				95.00	
23	do	do	do					65.00
Oct. 8	George C. Faville	Pleuro-pneumonia	Salary and expenses, September, and janitor, August.	2,822.23	1,208.29	69.00	3,799.01	17,511.99
8	E. C. Schroeder	do	Salary and expenses, September.	224.00	91.50	6.00		
8	W. H. Martineau	do	do	81.60	6.00			
8	C. K. Dyer	do	do	130.40	65.40			
8	E. W. Patterson	do	do	71.65				
8	A. W. Clement	do	do	114.20	79.83			
8	do	do	do	146.80	60.65			
8	Albert Hassall	do	do	130.40	63.50			
8	Daniel Keller	do	do	81.60	46.90			
8	Henry W. Hanna	do	Salary for September	81.60				
10	Carlin & Fulton	Baltimore	Locks and chains			70.00		
12	R. S. Forbes	do	Expenses, October 11		2.85			
15	D. E. Salmon	Pleuro-pneumonia	Expenses, September 26		2.25			
17	John Loeber <i>et al.</i>	Baltimore County	109 animals					2,941.60
17	Henry Eckert	do	38 animals					575.00
21	James A. McDevitt	Pleuro-pneumonia	Salary and expenses, September, 11 days.	88.00	18.25	11.00		
22	Charles H. Baker <i>et al.</i>	Baltimore County	15 animals				318.50	
22	do	do	19 animals					456.00
22	Jacob Haas & Son <i>et al.</i>	do	16 animals				379.50	
24	Fred. W. Young <i>et al.</i>	do	5 animals				100.00	
24	Samuel Fox	Baltimore County	6 animals					135.00
31	T. W. Spranklin	Pleuro-pneumonia	Salary and expenses, September	81.60	42.50			

	H. W. Hanna	do	Salary for October	84.20		
Nov.	C. K. Dyer	do	Salary and expenses, October	134.80	74.57	
3	A. D. Melvin	do	Salary and expenses, October 20 to 31	58.68	58.68	
3	Daniel Keller	do	Salary and expenses, October	84.20	55.90	
3	William S. Devroe	do	Salary and expenses, October 20 to 31	58.68	56.69	
3	W. H. Martenet	do	Salary and expenses, October	134.80	74.50	
3	E. C. H. Schroeder	do	do	84.20	37.70	
3	James Law	do	Salary and expenses, October 17 to 31	250.00	65.85	20
4	W. H. Rose	do	Salary and expenses, October 26	8.00	3.00	
4	Charles F. Reeder et al	Baltimore County	9 animals			180.00
4	do	do	57 animals			
5	Albert Hassall	Pleuro-pneumonia	Salary and expenses, October	134.80	76.25	
5	William S. Brooke	do	Salary and expenses, October 18 to 31	38.04	6.20	
5	James A. McDewitt	do	Salary and expenses, October	208.00	59.25	32.60
9	George C. Paville	do	do	208.00	5.70	94.96
10	William E. Zimmerman	do	Salary and expenses, October 25 to 31	19.02	3.10	
12	T. W. Spranklin	do	Salary and expenses, October	84.20	27.50	
12	A. W. Clement	do	do	151.60	57.00	
13	Robert S. Forbes	do	Expenses, November 15		3.10	
13	William K. Boyle & Son	Baltimore	Stationery, etc		250.00	
13	George C. Faville	Pleuro-pneumonia	Expenses, October		87.00	45.94
13	Julius Sachs & Son et al	Baltimore County	7 animals			108.00
19	do	do	20 animals			
19	L. B. Purnell	Baltimore County	2 animals, registered			578.00
19	L. B. Purnell et al	do	3 animals			320.00
19	Jacob Harman	Anne Arundel County	12 animals			96.90
19	do	do	19 animals			240.00
1	F. W. Patterson	Pleuro-pneumonia	Salary and expenses, October	117.90	94.79	580.00
30	L. G. Hubble	Guard	Salary for November 16 to 30	40.76		
	Total			3,200.48	1,427.43	1,422.90
				6,022.71	2,635.72	5,221.91
						24,786.99

ILLINOIS.

[illegible]

Expended from the appropriation for 1887-'88, exclusive of that made available March 3, 1887, by States—Continued.

ILLINOIS—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887. Aug. 2	James Law	Pleuro-pneumonia	Salaries and expenses, July 1 to 18 and 22 to 31.	\$460.00	\$12.52	\$5.50		
15	The Gupta Percha and Rubber Manufacturing Company.	Chicago.	Sundries.			61.11		
15	Keen & De Lang	do	Stationery			19.95		
15	George G. Standart & Co.	do	Sundries			54.50		
15	Fuller & Fuller Company	do	Chloride of lime			64.73		
15	Dunklee & Co	do	Hire of team, August 1, 2, and 3		15.00			
15	H. Rice & Sons	do	Lime			101.60		
15	Arxel Junberg	Cook County	3 animals				\$70.08	
15	Arxel Junberg et al.	do	6 animals					
15	Charles Gutzmam	do	1 animal				20.00	
15	Charles Gutzmam et al.	do	4 animals					49.00
15	Charles Grass et al.	Chicago.	Disinfecting			38.00		
15	Bower Talbot.	Pleuro-pneumonia	Salary and expenses, July	208.00	18.60			
15	Thomas J. Herr.	do	do	208.00	17.00			
15	James Anderson	do	do	134.80	7.75			
15	John P. Bond	do	do	200.00	14.05			
15	N. H. Paaren	do	do	200.00	6.65			
15	Nathan Perkins	Herdng and quarantining	do	54.00	1.54			
15	Dunklee & Co	Chicago.	Team hire, July		96.00			
15	Alex. Taylor	Pleuro-pneumonia	Salary for July	84.20				
15	George U. Faville	do	Salary and expenses, July	192.00	1.00			
16	A. D. Melvin	do	do	134.80	5.15			
20	A. Madsen	Cook County	1 animal			21.40		
20	Patrick Craine et al	do.	5 animals					123.36
20	John Burns	Chicago	Tank for disinfecting matter		4.35	7.00		
7	A. D. Melvin	Pleuro-pneumonia	Salary and expenses, August	134.80	17.65			
7	Thomas J. Herr.	do	do	216.00	13.46			
7	John P. Bond	do	Salary and office rent, August	126.40		33.00		
7	Sidney Shephard	do	Salary and expenses, August 1 to 9 and 12 to 31.	500.00	1.77	5.00		
7	James Law	do	Salaries for August.					
7	Olof Olson et al.	Quarantining and herding	do	1,687.90				
7	Wm. J. Watt et al.	Disinfectors	do	1,135.50				
7	Henry Althaus	Chicago.	Disinfecting		21.00	8.00		
7	Albert Mielke	do	Hire of team, August		30.00			
7	Bushnell & Bassler	do	Hire of team, July 1 and August 15 to 31			86.55		
7	Geo. G. Standart & Co	do	Sundries			65.40		
7	Fuller & Fuller Co.	do	Chloride of lime					

Expended from the appropriation for 1887-'88, exclusive of that made available March 3, 1887, by States—Continued.

ILLINOIS—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887.								
Nov. 5	James Anderson.....	Pleuro-pneumonia	Salary and expenses, October.....	\$134.80	\$8.15			
5	John P. Bond.....	do.....	do.....	208.00	5.45			
5	Bayer Talbot.....	do.....	do.....	208.00	41.00			
5	John Casewell.....	do.....	do.....			\$1.25		
5	William J. Watt <i>et al.</i>	Disinfectors	Salary and expenses, October 19 to 31..	80.00				
5	George Carter <i>et al.</i>	Herders	Salaries for October.....	373.00				
7	Fred. Mezger <i>et al.</i>	Cook County	do.....	1,107.40				\$25.50
7	H. R. Rice.....	do.....	3 animals					45.80
9	Heinrich Heinze <i>et al.</i>	do.....	6 animals					
9	H. Rice & Son.....	Chicago.....	Lime.....			97.60		
9	Fuller & Fuller Co.....	do.....	Chloride lime			53.03		
9	Geo. G. Standart & Co.....	do.....	Sundries			3.80		
9	Keen & De Lang.....	do.....	Stationery			9.48		
19	N. H. Paaren.....	Pleuro-pneumonia	Salary and expenses, October	208.00	4.45			
19	Albert Milke.....	Chicago.....	Team hire, October 7		3.00			
19	Joachim Man <i>et al.</i>	Cook County	6 animals					66.24
22	J. B. Trull.....	Pleuro-pneumonia	Salary, November 1 to 19.....	51.63				
	Total.....			7,600.57	312.34	320.29	\$38.67	1,701.36
				17,563.02	687.69	1,169.73	351.15	3,303.01

NEW YORK.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887.								
July 19	Daniel Purdy.....	Westchester County	1 animal					20.00
19	do.....	do.....	do.....				25.00	
23	Clark C. Miller.....	do.....	3 animals				30.00	
Aug. 15	Ch. B. Michener.....	Pleuro-pneumonia	Salary and expenses, July, 6 days.....	48.00	5.33			
16	James A. Brakell.....	do.....	Salary and expenses, July 22 to 31 ..	43.48	25.50			
17	J. C. Jackson.....	do.....	Salary and expenses, July	134.80	92.15			
20	George McKeltrick.....	Westchester County	14 animals				362.00	
20	do.....	do.....	41 animals					825.50
Sept. 7	James A. Walrath.....	Pleuro-pneumonia	Salary and expenses, August	134.80	81.39			
7	W. H. Wray.....	do.....	Salary and expenses, August 30 and 31..	20.00	5.30			
7	Charles Gregory <i>et al.</i>	Delaware County	46 animals					1,046.64
7	W. A. Shepard <i>et al.</i>	do.....	6 animals				145.00	
8	N. O. Flint.....	do.....	1 animal					26.66
9	J. C. Jackson.....	Pleuro-pneumonia	Salary and expenses, August.....	134.80	100.88			

13	Ch. B. Michener	do	Salary and expenses, August, 7 days.	56.00	21.61		
16	Henry W. Elkins	Queens County	1 animal			10.00	
17	James A. Breakell	Pleuro-pneumonia	Salary and expenses, August	134.80	145.15	.73	
19	Lucien T. Bell	do	do	112.00	.50		
22	Charles Bernard	Westchester County	10 animals			150.00	
22	do	do	49 animals				957.50
26	Armistead C. Henry, jr.	Kings County	3 animals			90.00	
27	Michael Marley	Westchester County	2 animals				100.00
27	do	do	11 animals			312.50	
				818.68	477.84	.73	2,976.30
8	W. H. Wray	Pleuro-pneumonia	Salary and expenses, September	250.00	1.96	32.50	
8	Ch. B. Michener	do	Salary and expenses, Sept. 23 and 30	16.00	1.58		
8	J. C. Jackson	do	Salary and expenses, September	130.40	116.80		
8	E. V. W. Shaw	Kings County	6 animals			169.23	
10	William J. Hobday	Pleuro-pneumonia	Salary and expenses, August 18 to 31	38.04	20.30		
11	do	do	Salary and expenses, September	81.00	43.00		
11	A. C. Young	do	Salary and expenses, Sept. 10 to 30	91.30	43.50		
15	D. E. Salmon	do	Expenses, August 3 to 11		50.64		
15	do	do	Expenses, September 27 to 30		26.15		
17	Norman Merritt	Westchester County	67 animals				1,504.00
19	James A. Breakell	Pleuro-pneumonia	Salary and expenses, September	130.40	100.50		
22	Armistead C. Henry, jr.	Kings County	2 animals			80.00	
22	Norman Merritt et al.	Westchester County	11 animals			195.00	
22	Herman Green	do	34 animals				
22	Asbury Cable	Delaware County	23 animals				
24	Fred. Kuckuk et al.	Queens County	12 animals			421.25	
24	Louis Gimpel et al.	Kings County	7 animals			235.00	
24	C. H. Ryan	do	2 animals			53.52	
24	Edw. Eales et al.	Westchester County	3 animals			55.00	
24	do	do	2 animals				35.00
25	John Carey	Queens County	16 animals			500.00	
27	M. F. Debinger	Kings County	1 animal			20.00	
28	George O. Mead	do	Burying cattle		21.00		
28	J. Elmer Ryder	Pleuro-pneumonia	Salary for September	130.40			
5	James A. Walrath	do	Salary for October 1 to 26	113.06			
5	do	do	Salary for September	130.40			
7	W. H. Wray	do	Salary and expenses, October	260.00	1.40		
7	Ch. B. Michener	do	Salary and expenses, October, 7 days	56.00	1.02		
7	Bernhard Gerder et al.	New York County	2 animals			25.00	
9	A. C. Young	Pleuro-pneumonia	Salary and expenses, October	134.80	14.03		
9	William J. Hobday	do	do	84.20	45.00		
9	Lucien T. Bell	do	Salary and expenses, September	208.00	31.20		
11	J. Elmer Ryder	do	Salary for August 22 to 31	43.48			
12	J. C. Jackson	do	Salary and expenses, October	134.80	124.42		
14	James A. Breakell	do	do	134.80	131.41		
19	J. Elmer Ryder	do	do	134.80	4.10		
19	Robert Harby	Delaware County	2 animals			22.00	
19	do	do	14 animals				154.00
19	do	do	2 animals				50.00
19	Hermann Reller	Kings County	9 animals			233.47	

Nov.

Expended from the appropriation for 1887-'88, exclusive of that made available March 3, 1887, by States—Continued.

NEW YORK—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887.								
Nov. 19	John E. Van Nostrand	Queens County	1 animal				\$25.00	
19	Isaac Mayer	do	2 animals				55.00	
25	Lucian T. Bell	Pleuro-pneumonia	Salary and expenses, October	\$208.00	\$26.00			
26	Mary Devine	Westchester County	4 animals				60.00	
26	do	do	19 animals					\$444.00
26	Mary Twiss <i>et al</i>	Kings County	24 animals				735.67	
26	Elbert Van Sise	do	2 animals				53.33	
26	Nicholas Fitting <i>et al</i>	Queens County	7 animals				160.00	
26	do	do	4 animals				90.00	
	Total			2,510.48	785.01	\$53.50	3,188.77	3,241.11
				3,329.16	1,267.85	54.23	4,313.27	6,217.41

NEW JERSEY.

July 23	George W. Rolfe	Middlesex County	1 animal				20.00	
Aug. 15	William Dimond	Pleuro-pneumonia	Salary and expenses, July	151.60	86.10	20.00		
15	Ch. B. Michener	do	Salary and expenses, July 29	8.00	5.45			
15	William B. E. Miller	do	Salary and expenses, July	160.00	46.72			
15	H. W. Rowland	do	do	117.90	36.70			216.00
19	Stacey B. Taylor	Burlington County	9 animals				48.00	
19	do	do	2 animals					280.00
19	George W. Rolfe	Middlesex County	8 animals				200.00	
19	do	do	8 animals	192.00	64.45			
Sept. 7	William B. E. Miller	Pleuro-pneumonia	Salary and expenses, August				30.00	
7	Hugh Sutherland	Hudson County	1 animal	151.60	102.42	20.00		
12	William Dimond	Pleuro-pneumonia	Salary and expenses, August					
				781.10	341.84	40.00	298.00	496.00
Oct. 8	H. W. Rowland	do	do	117.90	50.60			
8	William Dimond	do	Salary and expenses, September	146.80	111.76	20.00		
14	William B. E. Miller	do	Salary and expenses, September, nine days.	72.00	32.73			
18	H. W. Rowland	do	Salary and expenses, September	114.20	73.55			
22	James Finegan <i>et al</i>	Middlesex County	2 animals				45.00	
28	Robert L. Armstrong <i>et al</i>	do	27 animals				562.00	

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TEXAS.

1887.					
Aug. 19	T. T. D. Andrews	Collecting information.	Salary and expenses, July	151. 60	88. 20
Sept. 22	do	do	Salary and expenses, August	127. 17	23. 80
Nov. 19	do	do	Salary for September	146. 80	
	Total			425. 57	112. 00

PENNsylvania.

1887.				
Nov. 3	M. R. Trumbower	Pleuro-pneumonia	Salary and expenses, October 29 to 31	16. 00
4	W. H. Rose	do	Salary and expenses, October 31	8. 00
	Total			<u>24. 00</u>
				6. 60
				4. 75
				<u>11. 35</u>

DISTRICT OF COLUMBIA.

[illegible]

Expended from the appropriation for 1887-'88, exclusive of that made available March 3, 1887, by Stats.—Continued.

DISTRICT OF COLUMBIA—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.	Affected cattle.	Exposed cattle.
1887. Oct. 5	W. H. Rose	Pleuro-pneumonia	Salary and expenses, September, 24 days.	\$192.00	\$27.25			
6	M. R. Trumbower	do	Salary and expenses, September	278.00	45.85			
Nov. 3	do	do	Salary and expenses, October 1 to 28	176.00	21.55			
4	W. H. Rose	do	Salary and expenses, October 1 to 25 and 27 to 29.	192.00	16.75			
	Total			768.00	111.40			
				1,384.00	317.15			

VIRGINIA.

1887. Aug. 19	W. H. Rose	Pleuro-pneumonia	Salary and expenses, July 1 to 7 and 16 to 18.	64.00	29.10			
Sept. 6	C. K. Dyer	do	Salary and expenses, August (part)...	52.18	56.50			
				116.18	85.60			
Oct. 5	W. H. Rose	Pleuro-pneumonia	Salary and expenses, September 9 and 14	16.00	6.00			
Nov. 5	J. A. Walrath	do	Salary and expenses, October 27 to 31.	21.74	21.93			
				37.74	27.93			
	Total			153.92	113.53			

Date.	Name.	Remarks.	For what paid.	For scientific investigations.	For collecting information.	For investigation of reported diseases.
1887.						
July 18	S. J. Meeks	For experiment station	Dayton wagon	\$130.00		
18	F. L. Kilborne	do	Sundries	10.80		
30	Theobald Smith	Laboratory	Salary for July	151.60		
30	F. L. Kilborne	Experiment station.	do	134.80		
30	V. A. Moore	Laboratory	do	75.80		
30	William Alexander	do	do	60.60		
30	William E. Mundell	Experiment station.	do	50.50		
Aug 1	E. W. Perry	Collecting information.	do		\$208.00	
2	James Law	Investigating disease, Minnesota	Salary and expenses, July 19 to 21			\$91.29
2	H. J. Ruppert	Experiment station	Rent for July	41.66		
3	F. M. Webster	Investigating station	Salary and expenses, July 1 to 15	72.35		
4	Hutchins & Betz	For laboratory	Sundries	12.32		
6	H. M. Taylor	Collecting information.	Salary for July		200.00	
15	Geo. W. Rust	do	do		151.60	
16	Cooper Curcie	Investigating sheep disease.	Salary and expenses for July	208.51		
22	John A. Butler	For experiment station	Repairs to pump	12.00		
30	Elphozo Young's Company	do	Prepared food	6.50		
30	Theobald Smith	Laboratory	Salary for August	151.60		
30	F. L. Kilborne	Experiment station	do	134.80		
30	V. A. Moore	Laboratory	do	75.80		
30	Wm. Alexander	do	do	60.60		
30	Wm. E. Mundell	Experiment station	do	50.50		
30	Cooper Curcie	Investigating sheep disease	do	134.80		
1	do	do	Expenses, August	121.65		
2	H. J. Ruppert	Experiment station	Rent for August	41.66		
3	F. M. Webster	Investigating buffalo-gnat	Expenses, July 2, 11, and 14	13.00		
7	H. M. Taylor	Collecting information	Salary for August		270.00	
7	E. W. Perry	do	do		216.00	
7	James Law	Investigating disease, Indiana	Salary and expenses, August 10 and 11			49.95
10	George W. Rust	Collecting information	Salary for August		151.60	
14	R. M. Bell	do	Salary and expenses, July		147.12	
15	Bullen & McKeever	For experiment station	2 calves	17.80		
24	W. H. Wainsley & Co	For laboratory	Instruments	7.60		
30	F. L. Kilborne	For experiment station	Prepared food, etc	23.60		
30	John S. Dewey	Laborer, experiment station	Salary, August 17 to September 5	25.50		
30	Theobald Smith	Laboratory	Salary for September	146.80		
30	F. L. Kilborne	Experiment station	do	130.40		
30	Cooper Curcie	Experimental investigation	do	130.40		
30	V. A. Moore	Laboratory	do	73.40		

Investigations—Continued.

Date.	Name.	Remarks.	For what paid.	For scientific investigations.	For collection of information.	For investigation of reported diseases.
1887. Sept. 30	William Alexander.	Laboratory.....	Salary for September.....	\$58.80		
30	W. E. Mundell.....	Experiment station.....	do.....	49.00		
				2,415.15	\$1,438.32	\$141.24
Oct. 3	H. J. Ruppert.....	do.....	Rent for September.....	41.66		
6	H. M. Taylor.....	Collecting information.....	Salary for September.....	30.80	200.00	
7	L. H. Hopkins.....	For experiment station.....	Sundries.....		146.80	
8	George W. Rust.....	Collecting information.....	Salary for September.....		208.00	
8	E. W. Perry.....	do.....	do.....			
8	Elphozo Youngs Company.....	For experiment station.....	Prepared food.....	16.25		
10	F. L. Kilborne.....	Investigating disease, Virginia.....	Expenses, October 4 and 5.....			8.75
12	R. M. Bell.....	Collecting information.....	Salary and expenses, September 10 to 30.....		193.99	
12	do.....	do.....	Salary and expenses, August.....		172.22	
14	Chesapeake and Potomac Telephone Company.....	Experiment station.....	Rental, July to September.....	35.94		
14	Theobald Smith.....	For laboratory.....	Sundries.....	2.66		
14	do.....	Investigating diseases, Virginia.....	Expenses, October 4.....			7.25
14	do.....	Investigating diseases, New Jersey.....	Expenses, September 27 and 28.....	11.61		
15	H. M. Taylor.....	Collecting information.....	Expenses, July to September.....		400.03	
17	Z. D. Gilman.....	For laboratory.....	Sundries.....	49.35		
22	Edw. B. Markham.....	For experiment station.....	10 pigs.....	30.00		
25	Hutchins & Belz.....	For laboratory.....	Sundries.....	39.40		
31	Theobald Smith.....	Laboratory.....	Salary for October.....	151.60		
31	F. L. Kilborne.....	Experiment station.....	do.....	134.80		
31	Cooper Curdick.....	Expenses investigation.....	do.....	75.80		
31	V. A. Moore.....	Laboratory.....	do.....	06.90		
31	William E. Mundell.....	Experiment station.....	do.....	50.50		
31	E. W. Perry.....	Collecting information.....	do.....		208.00	
Nov. 3	H. J. Ruppert.....	Experiment station.....	Rent for October.....	41.66		
3	James Law.....	Investigating disease, Minnesota.....	Salary and expenses, October 5 to 9.....			118.08
5	H. M. Taylor.....	Collecting information.....	Salary for October.....		200.00	
8	L. Mangum.....	For experiment station.....	Ice, July to October.....	16.50		
9	Church & Stephenson.....	do.....	Lumber.....	22.72		
10	Ed. E. Allen.....	Investigating disease, Texas.....	Salary and expenses, October 13 to 22.....			111.01
10	George W. Rust.....	Collecting information.....	Salary for October.....		181.60	
12	Cooper Curdick.....	Scientific investigation.....	Expenses for September and October.....	108.51		
16	H. M. Taylor.....	Collecting information.....	Expenses for October.....		167.00	

17	F. L. Kilborne	For experiment station	Sundries	\$22.25	
19	Johanna Curtin	do	1 cow	20.00	
21	Thomas H. McAllister	For laboratory	Lamp	5.00	
22	Bullen & McKeever	For experiment station	10 pigs	20.00	
23	Z. D. Gilman	For laboratory	Sundries	34.40	
25	Theobald Smith	Investigating disease, New Jersey	Expenses, October 27 to 29	22.13	
30	do	Laboratory	Salary for November	146.80	
30	F. L. Kilborne	Experiment station	do	130.40	
30	Cooper Cutrice	Laboratory	do	130.40	
30	V. A. Moore	do	do	73.40	
30	William Alexander	do	do	58.80	
30	William E. Mundell	Experiment station	do	49.00	
Total			1,745.61	2,227.64	267.82
H. M. Taylor			Transportation	18.15	
do			do	18.15	
Cooper Cutrice			do	7.00	
do			do	11.13	
Total			4,178.91	3,702.26	409.06

MISCELLANEOUS.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.
1887.						
July 23	B. Westermann & Co		Books			\$25.93
25	John C. Parker		Subscriptions			44.95
30	D. E. Salmon	Washington	Salary for July	\$252.70		
30	Miles Fuller	do	do	126.40		
30	W. J. Cowing	do	do	151.60		
30	P. L. Lyles	do	Salary for July, 12 days	45.65		
30	E. B. Jones	do	Salary for July	101.10		
30	Mary Sullivan	do	do	84.20		
30	R. F. Logan	do	do	60.60		
30	Mary T. Dent	do	do	55.60		
30	Robert S. Forbes	do	do	97.50		
30	J. W. Dyer	do	2 frames for photos of lungs			7.00
Aug 11	Capitol, North O Street and South		Street railway tickets		\$12.50	
15	Washington Rwy. Co.					
15	Adams Express Company		Charges, July			2.60
19	John C. Parker		Stationery			21.00
22	H. H. Metcalf		Salary, July 20 to 31	52.17		
30	D. E. Salmon	Washington	Salary for August	252.70		
30	Miles Fuller	do	do	126.40		
30	W. J. Cowing	do	do	151.60		

MISCELLANEOUS—Continued.

Date.	Name.	Remarks.	For what paid.	Salaries.	Traveling expenses.	Miscellaneous.
1887.						
Aug 30	P. L. Lyles.....	Washington.....	Salary for August.....	\$117.90		
30	E. B. Jones.....	do.....	do.....	101.10		
30	Mary Sullivan.....	do.....	do.....	84.20		
30	R. P. Logan.....	do.....	do.....	60.60		
30	Mary T. Dent.....	do.....	do.....	55.60		
30	Robert S. Forbes.....	do.....	do.....	101.25		
Sept 3	London Gazette.....	do.....	Subscription.....			\$12.65
8	B. W. Westermann & Co.....	do.....	Books.....			31.65
12	Western Union Telegraph Co.....	do.....	Charges, July.....			7.05
19	do.....	do.....	Charges, August.....			9.95
23	H. H. Metcalf.....	do.....	Salary for August.....	134.80		
27	John C. Parker.....	do.....	Stationery.....		\$33.00	3.68
27	A. S. Mercer.....	do.....	Salary and expenses, August.....	134.80	8.25	
27	do.....	do.....	Salary and expenses, July 12 to 31.....	86.96		
30	D. E. Salmon.....	Washington.....	Salary for September.....	244.60		
30	Miles Fuller.....	do.....	do.....	122.20		
30	W. J. Cowing.....	do.....	do.....	146.80		
30	P. L. Lyles.....	do.....	do.....	114.20		
30	E. B. Jones.....	do.....	do.....	97.80		
30	Mary Sullivan.....	do.....	do.....	81.60		
30	R. P. Logan.....	do.....	do.....	58.80		
30	Mary T. Dent.....	do.....	do.....	53.80		
30	Robert S. Forbes.....	do.....	do.....	97.50		
Oct. 4	Wyckoff, Seamans & Benedict.....	do.....	Repairs to type-writer.....	3,452.73	53.75	105.86
6	A. S. Mercer.....	do.....	Salary for September.....			2.90
12	V. G. Fischer.....	do.....	Stationery.....	130.40		9.70
14	Chesapeake and Potomac Telephone Company.....	do.....	Rental, July to September, and moving telephone.....			16.85
17	Baltimore and Ohio Telegraph Company.....	do.....	Charges, September.....			1.00
25	V. G. Fischer.....	do.....	Stationery.....			16.15
26	Western Union Telegraph Company.....	do.....	Charges, September.....			4.12
27	Melville Lindsay.....	do.....	2 pieces cloth.....			3.78
29	Gore, Janney & Co.....	do.....	File-case.....			50.00
31	Library Bureau.....	do.....	1 binder.....			1.27
31	H. H. Metcalf.....	do.....	Salary for September.....	130.40		

31	D. E. Salmon	Washington	Salary for October.	252.70		
31	Miles Fuller	do	do	126.40		
31	W. J. Cowing	do	do	151.00		
31	P. L. Lyles	do	do	117.90		
31	E. B. Jones	do	do	101.10		
31	Mary Sullivan	do	do	84.20		
31	R. P. Logan	do	do	60.60		
31	Mary T. Dent	do	do	55.60		
31	R. S. Forbes	do	do	97.50		
31	A. M. Farrington	do	do	97.82		
Nov. 9	A. S. Mercer	do	Salary for October, 16 days	134.80	14.00	7.45
14	B. W. Westermann & Co	do	Books			
14	H. H. Metcalf	do	Salary for October	134.80		290.00
19	The Chicago Times	do	Advertising			4.80
25	V. G. Fischer	do	Stationery			5.95
10	Adams Express Company	do	Charges			123.44
26	John C. Parker	do	Stationery			
29	Chicago, Burlington and Quincy R. R. Company	do	Transportation		25.50	
30	D. E. Salmon	Washington	Salary for November	244.00		
30	A. M. Farrington	do	do	183.60		
30	Miles Fuller	do	do	122.20		
30	W. J. Cowing	do	do	146.80		
30	P. L. Lyles	do	do	114.20		
30	R. S. Forbes	do	do	105.82		
30	E. B. Jones	do	do	97.80		
30	Mary Sullivan	do	do	81.60		
30	R. P. Logan	do	do	58.60		
30	Mary T. Dent	do	do	53.80		
				2,884.94	39.50	537.41
	A. S. Mercer	Cheyenne to Denver	Transportation		8.60	
	Total			6,337.67	101.85	703.27

